DOCUMENT RESUME

ED 071 173 EA 004 760

AUTHOR	Schuchat, Theodor
TITLE	Informal Education: 'Open Classroom' Provokes Change, Controversy. An Education U. S. A. Special Report.
INSTITUTION	National School Public Relations Association, Washington, D.C.
PUB DATE	72
NOTE	63p.
AVAILABLE FROM	National School Public Relations Association, 1801 North Moore Street, Arlington, Virginia 22209 (Stock 411-12840, $4.00)
EDRS PRICE	MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	Administrator Role; *Case Studies; Educational Change; *Flexible Classrooms; Flexible Scheduling; Humanization; *Open Education; *Open Plan Schools; Program Costs; Program Development; Self Actualization; *Self Directed Classrooms; Student Centered Curriculum; Student Teacher Relationship; Teacher Education; Teacher Role
IDENTIFIERS	*Informal Education

ABSTRACT

This document defines informal education and discusses some common misconceptions held about what constitutes informal education. The early development of informal education is traced from several theories of child development and learning through its period of trial and error implementation in Great Britain and in the United States. In an effort to discover what it is that constitutes an "informal" classroom, the author examines selected informal classrooms throughout the country and describes how to set up an informal classroom in a formal school by the establishment of resource centers in art, science, language arts, and mathematics. Three chapters deal with the roles of the teacher, the child, and the administrator in informal education. One chapter discusses informal education in secondary schools and provides examples of ongoing programs being implemented at that level. The publication concludes with a discussion of the problems and future prospects of informal education. (Author/DN)

Informal Education

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Informal Education: 'Open Classroom' Provokes Change, Controversy

A Publication of the
National School Public Relations Association

EA 004 780

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Education U.S.A., the independent weekly education newsletter founded in 1958, and *Education U.S.A. Special Reports*, which probe in depth a single area of education, have introduced a new dimension to educational journalism in the United States. *Education U.S.A.* publications are published by the National School Public Relations Association.

News and interpretive features for the newsletter, based on materials from hundreds of sources, are written by the editors of *Education U.S.A.* and by special correspondents. The aim: to inform busy American educators, board members, legislators and other citizens of important developments in education. The *Washington Monitor* section of *Education U.S.A.* is a current report on activities at the U.S. Office of Education, Capitol Hill and other federal agencies that make significant decisions in education.

The weekly newsletter *Education U.S.A.* is published in cooperation with: the American Association of School Administrators, the American Association of School Librarians, the Association for Supervison and Curriculum Development, the Association of School Business Officials of the United States and Canada, and the Council of Chief State School Officers.

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Education U.S.A. is published weekly, September through May, and twice in the summertime. Subscriptions are $21 a year. About a dozen *Education U.S.A. Special Reports* are published each year. For the current list see the inside back cover of this report.

Informal Education: 'Open Classroom' Provokes Change, Controversy was written by Theodor Schuchat. It was developed by the *Education U.S.A. Special Report* staff: Shirley Boes, Managing Editor; Walda Roseman, Editorial Research Associate; Roy K. Wilson, Editorial Director. Production: Cynthia Menand, Manager; Joy Ford, Alice Mansfield and Joyce Pullen.

Additional copies of *Informal Education: 'Open Classroom' Provokes Change, Controversy* may be ordered from the National School Public Relations Association, 1801 N. Moore St., Arlington, Va. 22209. All orders must be accompanied by payment unless submitted on an authorized purchase order. Single copy, $4. Stock #411-12840.

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Informal Education

OVERVIEW

Informal education--or the "open classroom" as it is often called--is the center of one of the major controversies in American education in the 1970s.

It has resulted in fired administrators, rebellious parents and defeated bond and tax elections. But it has also gained enthusiastic supporters who believe it is an answer to many of today's educational problems.

One thing is certain: Thousands of elementary and secondary classrooms present a surprisingly different picture these days to many parents and teachers. Instead of children sitting quietly in orderly rows of desks, with the teacher at the blackboard up front, textbook in hand, the students may be found in many different areas of the room and so may their teachers, the aides or assistants and perhaps even a parent or two. The children may be chattering in small groups, reading alone in a quiet corner, painting a picture or weighing a frog. The teacher may be answering a question, listening to a song or playing a word game. These cheerfully active classrooms are part of the "informal education" movement that has caused considerable discussion in both lay and educational circles.

The present experiments in informal education, as we shall call it, have a long history. "Teach your scholar to observe the phenomena of nature; you will soon rouse his curiosity, but if you would have it grow, do not be in too great a hurry to satisfy his curiosity," Jean Jacques Rousseau wrote in 1762 in Emile. "Put the problems before him and let him solve them himself," he continued. "Let him know nothing because you have told him, but because he has learned it for himself. Let him not be taught science, let him discover it. If ever you substitute authority for reason, he will cease to reason, he will be a mere plaything of other people's thoughts."

Informal education is Rousseauism resurgent. Its supporters believe it fits fast-changing times --this era of renewed emphasis on equality of the sexes, races and age groups. Rousseauism may be not only a good philosophy for present times but also good pedagogy, for research has yet to prove wrong the French social

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philosopher's insight that: "Undoubtedly the notions of things thus acquired for oneself are clearer and much more convincing than those acquired from the teachings of others; and not only is our reason not accustomed to a slavish submission to authority, but we develop greater ingenuity in discovering relations, connecting ideas and inventing apparatus than when we merely accept what is given us and allow our minds to be enfeebled in indifference."

After more than two centuries, then, Rousseau's theories are again being applied, this time more widely than ever before. In thousands of schoolrooms, from Harlem to Watts, from Fargo to Atlanta, children are experiencing what may be termed informal education, open corridors, open classrooms, free day, integrated day or something else. Each practice arises from the same theory and is likely to make major changes in American education.

To some, the prototype of the informal classroom was the one-room school, where a single teacher made individual assigments to pupils on the basis of their level of achievement. In the one-room school of hallowed tradition, students helped and worked with one another while the teacher guided the general activity.

Today, too, the hallmark of informal education is flexibility: in scheduling of time (no bells tolling the end of periods); in space (few partitions permanently dividing different areas, no desks fixed to the floor); in curriculum (children giving direction to their own learning); and, above all, flexibility in attitude.

The inherent attitude of informal education is respect--sincere trust in each student's desire and ability to learn if he is allowed to do so at his own speed and in his own way.

A Sign of the Times

The trend toward informal education is widespread and growing. In 1970, according to the Stanford U. Center for Research and Development in Teaching, half the 3,000 newly constructed public schools were built with a view toward some type of informal education. One reason is that single-purpose rooms, such as gymnasiums or traditional classrooms, are uneconomical. As early as the 1950s architects were convincing school boards to build roomless buildings, relying upon movable partitions and furniture to adapt space to various uses. To some extent, then, function is following form--although advocates of informal education say that form should follow function.

Even in classrooms that are the most tradition-oriented, according to many observers, teachers are taking the first steps toward acceptance and adoption of informal education, i.e., they are thinking about and studying the claims of its proponents and critics.

Several factors account for today's search for a new approach to teaching children. First, perhaps, was the realization that the volume of information and the rate of social change are outstripping human ability to absorb knowledge. As early as 1951, anthropologist Margaret Mead pointed out: "American children are growing up within the most rapidly changing culture

of which we have any record in the world, within a culture where for several generations each generation's experience has differed sharply from the last, and in which the experience of the youngest child in a large family will be extraordinarily different from that of the first born. Mothers cannot look to the experience of their mothers, nor even to that of their older sisters; young husbands and fathers have no guides to the behavior which they are assuming today."

The world is gathering facts at a rate of a million "man-days" of knowledge every half hour, according to recent studies. Students cannot be expected to absorb even a sliver of this increment in traditional ways; they must be taught instead, how to gather and assess information--in short, how to learn.

Another influence for change is the restlessness among people who are alienated and frustrated and who question traditional views. And much of this dissatisfaction is focused on the school. This focus may be in part a reaction to the earlier belief, still widely held, that education is the panacea for all personal and social ills. In any event, it has engendered self-examination and reevaluation of the traditional practices and theories of education and has brought about an emphasis on the individual child, rather than on children as a group.

In recent years, also, a group known as the "romantic" critics, which includes such writers as Herbert Kohl, Jonathon Kozol and John Holt, has demanded an end to lockstep assignments, testing and technology in the name of educational reform. Instead, they propose warm relationships between teacher and pupil, among students, and between school and society.

The writings of Jean Piaget, a European child psychologist, have stimulated change, too. Although he did not study the educational process directly, Piaget formulated theories of cognitive development based on stages in a child's growth. His theories are being used today by many educators as a basis for achievement groupings and individualized curriculum.

Salvation of the Schools?

In 1970, Charles E. Silberman, a Fortune magazine editor and former Columbia U. professor, released Crisis in the Classroom, reporting the results of a three and one-half year, $300,000 study of the American school system that he undertook for the Carnegie Foundation. The book's round condemnation of the U.S. education system caused considerable concern across the country, in part because of its trenchant, vivid style. "It is not possible to spend time visiting public school classrooms without being appalled by the mutilation visible everywhere--mutilation of spontaneity, of joy in learning, of pleasure in creating, of sense of self...," Silberman wrote. "The public schools are the kind of institution one cannot really dislike until one gets to know them well," he charged. "Because adults take the schools so much for granted, they fail to appreciate what grim, joyless places most American schools are, how oppressive and petty are the rules by which they are governed, how intellectually sterile and aesthetically barren the atmosphere, what an appalling lack of civility obtains on the part of teachers and principals, what contempt they unconsciously display for children as children."

Silberman scored traditional schools for "preoccupation with order and control, the slavish adherence to the timetable and lesson plan, the obsession with routine qua routine, the absence of noise and movement, the joylessness and repression, the universality of the formal lecture or teacher-dominated discussion in which the teacher instructs the entire class as a unit, the emphasis on the verbal and the deemphasis of the concrete, the inability of students to work on their own, the dichotomy between work and play."

Silberman's treatise is not as grim as his view of traditional education. "Mine is a radical book," he contends, "but it is the first radical critique that argues the system can be saved." He sees salvation in the informal classroom. "My studies have demonstrated, beyond any doubt, that schools can be human and still educate well," he told the American Educational Research Assn. in February 1971. "They can be genuinely concerned with gaiety and joy and individual growth and fulfillment without sacrificing concern for intellectual discipline and development.

"They can be simultaneously child-centered and subject- or knowledge-centered. They can stress aesthetic and moral education without weakening the three R's. They can do all these things if--but only if--their structure, content and objectives are transformed.... Schools of this sort exist in the United States on a small but rapidly growing scale," Silberman said.

Crusaders and Critics

Silberman described in great detail the forms of informal education found in different parts of the United States as well as in Great Britain, where it has been an accepted educational technique for years. Joseph Featherstone's articles in New Republic had aroused initial interest in informal education. Then Silberman's best-selling book made the idea of informal education an oft-discussed topic at PTA gatherings, education meetings and cocktail parties. Havens of informal education, some of them long established, were suddenly in the spotlight of the mass media. New informal schools were opened throughout the country under public as well as private auspices.

Of course, informal education has its critics, too. Many parents complain that their children are having too much fun in school to be learning anything. Skeptical administrators predict that graduates of informal classrooms will be unable to adapt to traditional classrooms at junior high, secondary or college levels. A John Birch Society group in Arizona attacked informal education as "unpatriotic."

Arnold Arnold, an author of numerous books and an education writer for the National Newspaper Syndicate, Inc., who favors the concept, says it has caused major problems and much confusion among teachers. He says many open-space schools "have been recently built, hastily staffed, and introduced to teachers, students and parents with heady promises, but little preparation."

One of the main problems, he adds, is discipline. "Children, used to a closed and regimented classroom or home, find it difficult to adjust to a regimen that gives them a good deal of freedom. And, in the current tradition of their elders, they usually mistake freedom for license."

Some critics contend that informal education is merely the latest name for John Dewey's progressive education, which was considered the latest word in the 1930s and 1940s. However, Dewey's philosophy soon proved to be a label slapped on everything from real, beneficial reform to old techniques in new trappings to distortions of Dewey's ideas and ideals.

Many advocates of informal education do not use the words "technique" or "method" in connection with informal education. They agree with Silberman's definition of informal education as "less a method than a set of shared attitudes and convictions about the nature of childhood, learning and schooling." A broadly shared judgment on the value of informal education is that of New York's Center for Urban Education: "Open education...will have served a valuable purpose if it encourages and fosters a fresh examination of what we are currently doing and if it helps provoke each educator to make more conscious efforts to examine and develop his own assumptions about children, learning and knowledge." That is the aim of this Special Report.

The 'Ultimate' in Informal Education

A new city where "the main street of the town would be the school's main corridor" and where all the city's approximately 250,000 residents would be part of the "learning environment" from birth to death is planned for Minnesota. The 50,000-acre site for the new city--now called MXC (Minnesota Experimental City) by its planners--will be selected in late 1972. (It must be at least one hour's driving time from any existing metropolitan area.) Developers hope to break ground in 1976 and will aim for completion of the city in 1986-90. Funds for the project will come from federal, state and private industry sources. Developers stress that the city is planned as an "alternative," not as the final answer for the future life of American cities.

MXC's educational system will use the entire city as a learning laboratory with each occupant a potential life-long learner and resource person, says Ron Barnes, director of educational planning for MXC. A computerized list of available resources, including people, tools, equipment and facilities, will enable each resident to pursue his particular interests and learning. In addition, many different types of "centers" are being planned for MXC. A DOR Center will disorient, orient and reorient the city's residents as they "unlearn" many of the truths of their old ways of life, prepare for living in the new city and, if they choose, prepare to leave the city. The "Beginning Life Center" will offer a variety of learning experiences and opportunities for parents and their children, ages 0-6. Other learning centers may focus on home and family, business and industry, banks of knowledge (more expansive than present libraries) and projects such as boat or space ship construction. Schools in the traditional sense will exist only as necessary to prepare those persons who are about to enter a structured learning environment such as college, Barnes says. (For further information, contact: Minnesota Experimental City, 3100 38th Ave. S., Minneapolis, Minn. 55406.)

What Informal Education Isn't and Is— and Why*

What It Isn't	What It Is	Why
Informal education is not necessarily the same as an open-plan school.	Informal education is an approach to educating children, not a style of architecture.	Even a building without walls can be impregnably sealed in by psychological walls, restrictive routines and rigid scheduling. The free atmosphere that is the stamp of the open school can happen even in an egg-crate type of building.
Informal education is not synonomous with "British Infant School."		"British Infant School" is a general term covering as many educational possibilities as does the term "American elementary school."
Informal education is not "permissive education."	In informal education, both teachers and children have many options.	A child's need for support and guidance from, and shared relationships with, teachers and other adults is recognized and respected in an informal school.
Informal education is not synonomous with a "cluster plan" school. (A feature of the "cluster plan" school is a common room where, watched by an aide, children can get together to "let off steam." Teaching takes place in the classrooms around it.)	In an informal school, "work" is not differentiated from "play." Informal education is based on faith in a child's ability to act independently and to assume responsibility for his own behavior. In an informal school, learning is considered a social act, and children learning from children is a way of life.	In an informal school, space does not determine the relative educational value of an activity. Management of space and provision of materials are integral parts of goal-oriented planning. In an informal school, interaction among children is more the rule than the exception. In such schools "policing" has no place.
Informal education is not achieved simply by throwing open the classroom door and shoving furniture, materials and children into the corridor.	Informal education demands that maximum and imaginative use be made of all spaces. In informal education, space is viewed as a commodity for which the child has the first option. When his needs are met, then adults in the school community can be considered.	Open doors do not always assure the freedom of movement that is the mark of informal education. A restrictive value system may limit the types of activities offered in a corridor arrangement and thus relegate them to the position of unimportant adjuncts. Not only corridors, but administrative offices and staff rooms are open to children as the need arises in an informal school.

What It Isn't	What It Is	Why
Informal education does not support the view that childhood is a time to hurry and get ready for the "real business" of adult life.	Informal education values childhood as an important stage of "real life"—a time of growth on which to capitalize. Informal education views learning as a continuous process within the total life environment.	Approaching childhood as merely a getting-ready-for-life time tends to minimize it, and educators tend to try to rush learning so the children can get on with the business of "living." Instead, informal education values as assets to learning such childhood attributes as physical and mental energy, egocentricity, individuality, emotional volatility, eagerness to learn. Its aim is to capitalize on these attributes.
Not all individualized-instruction programs qualify as informal education. Complex scheduling of large-group, small-group and tutoring periods does not constitute informal education.	Informal education requires that learning be individual in rate and style. Informal education requires the integrated approach to subject matter and skill areas. Informal education requires flexibility in dealing with circumstances as they arise.	Many attempts at individualizing instruction involve separation of the materials to be learned into departments of instruction and skill areas. Such departmentalization is not characteristic of the informal school. Complex scheduling necessitates rigid adherence to time limits. This can only result in a teacher-dominated situation, which is completely incompatible with informal education's commitment to the independence and responsibility of the individual learner.
Ability grouping does not constitute informal education.	Informal education enhances teaching resources by encouraging children of different age and ability levels to mix freely and to teach each other.	Ability grouping can limit the number and range of teaching resources.
Team teaching is not necessarily informal education.	Team teaching may be a strong component of the informal school.	Teams of teachers having common goals but varying interests and expertise can work very well in an informal school situation, provided there is no rigid adherence to a set team model.
Informal education is not identified with any specific organizational staffing and grouping pattern.	Informal education takes advantage of many organizational, staffing and grouping patterns in order to capitalize on the individuality of the children and the teachers involved.	The only characteristic of informal education that is constant is its flexibility.

Adapted from "Everybody talkin' 'bout open education ain't goin' there," by Ruth C. Flurry, acting chief, Bureau of Child Development and Parent Education, New York State Dept. of Education, *Early Years,* October 1971.

TRACING THE SOURCES

Informal education did not spring up full-blown overnight, nor was it the brainchild of any single individual. It developed from several theories of child development and of learning, tempered by trial and error in Great Britain and the United States.

The Piaget Approach

Although he was not interested in education per se, the Swiss child psychologist Jean Piaget investigated children's cognitive development. He found that children develop their thinking processes in recognizable stages, the sequence of which is always the same. The stages of intellectual growth, he said, correspond only roughly with a child's age. Learning takes place over various periods of time, depending on the child, and is achieved through repeated encounters with concrete experiences and by exchanging different points of view with other children.

Piaget scored the hallowed "lecturing" method of teaching. Since children do not have cameras or tape recorders for brains, he argued, they cannot photograph the pages of a book or record a lecture in order to learn. Instead children use both reason and experience to form their ideas of the world and to constantly test these ideas with concrete experiments. Memory is part of this learning, according to Piaget, but self-motivated discovery is real learning. "The essence of Piaget's theory," Alvin Hertzberg and Edward J. Stone wrote in Schools Are for Children, "is that a child comes to a real understanding of the world primarily through his own efforts."

Debts to Dewey and Others

John Dewey, too, held that children learn best if they are encouraged to become involved with their own education. He advocated, in addition, increased extracurricular activities, ability grouping and study by "projects" rather than adherence to the textbook. The schools of his day were too discipline-conscious, in Dewey's opinion. "Enforced quiet and acquiescence prevent students from disclosing their real natures.... They put seeming before being. They place a premium on preserving the outward appearance of attention, decorum and obedience," he wrote.

Many other theorists contributed to the philosophy of informal education. Maria Montessori, noted preschool innovator, expounded the belief that a child's work is play; through play he learns about the world. She set

up nursery schools in which the playthings were learning equipment. Among other notable contributors were Georges Cuisinier, whose famous colored rods are used to teach children mathematical relationships, and Susan Isaacs, who delved into the philosophy of innovative education techniques.

The first to try informal education on a large scale, however, were the British. As the Center for Urban Education has noted: "Long before Piaget was the influence that he is today, educators in England had developed an approach to which they later added Piaget's insights on cognitive development. They observed that children were curious, learned most readily from things around them which interested them, learned in different ways and at their own pace. They observed that, for any individual child, the pattern of his performance and learning was often uneven. Children learned best, they found, when sparked by their own interests or by a question they themselves had asked of experience."

Historically, informal education can be traced to the mid-1920s when Sir Henry Hadow was commissioned by Parliament to study and report on the state of elementary education in Great Britain. His commission issued three reports that led to general acceptance of British public schools as effective centers of learning. Until then, they had been considered satisfactory only for the children of the poor. Middle- and upper-class children were sent to private schools. Hadow encouraged the adoption of standards for teacher certification and concomitant responsibilities for certificated teachers. Until then the syllabus and teaching methods were prescribed and severely limited. Hadow fostered what were then considered extreme ideas: physical education, for example, and art classes in which students were allowed to use paints and brushes to depict what they wanted rather than hard pencils to draw what they were assigned.

The Hadow report encouraged the establishment of nursery schools and kindergartens for 3-, 4- and 5-year-olds. These pre-primary schools, Hadow cautioned, should not have to conform to the discipline standards of the primary schools, because enforced discipline would be harmful to the intellectual development of such young children. He urged--and achieved--experimentation not only in nursery schools but in kindergartens as well. Instruction in the pre-primary schools became more individualized.

"The progressive movement in Infant Schools was well on its way in London, for example, in 1930," Dorothy Gordon, author and TV moderator, has written. "Indeed, when I was at college--1918-1921--pioneer schools using play were in existence.... The reason Susan Isaacs' book, Intellectual Growth, had so much influence was that it gave the why's to the progressive movement and led others to feel confidence in joining the pioneers who were well at work before this book appeared...."

Bombed-Out Education

During World War II, when London and other major industrial areas in Great Britain were under almost nightly bombardment, many British parents sent their children to the country, along with their teachers. The evacuees included not only wealthy children in private schools but also middle-class

and poor children from the public elementary schools. Cut off from their families, neighborhoods and familiar schoolyards and classrooms, the children presented their teachers with great problems. The unfamiliarity of their situation made them less amenable to discipline, for example, and undisciplined children could not learn, according to theories of education prevalent at the time. Various methods were tried to get the children to sit in orderly rows and listen quietly to their teachers, but without success. Many teachers became frustrated and gave up. Others redoubled their efforts. Some decided to rethink their theories.

The unusual circumstances gave this third group of teachers the opportunity to test new ideas and to try new ways to entice their charges to want to learn. The exigencies of war were thus the origin and the impetus for widespread use of the theories of informal education that had been tried in Great Britain on a small scale for nearly two decades. The wartime evacuation made teachers realize how important home was to their children, not only emotionally but educationally as well. At home, children got individualized attention that buttressed the often inadequate group-centered education in the classroom. Teachers who were looking for more effective methods of education under wartime conditions therefore dusted off the Hadow reports. After the war, more experimentation took place. Many former soldiers entered the teaching profession, bringing with them a questioning attitude toward long-accepted theories and values.

The Plowden Report

In 1967 the British government published a two-volume document, Children and Their Primary Schools, the result of a three-year study by a Parliamentary Commission under the leadership of Lady Brigit Plowden. The commission studied middle-class schools, poor and mixed urban schools, schools using informal education in dilapidated buildings and in spanking new structures, and schools in which the student-teacher ratio was as high as 40 to 1. The Plowden report traced the development and extent of informal education in British primary schools and gave it unqualified approval.

"There has been a great wind of change in the primary schools since most of today's adults were primary school children and many of the old beliefs have been blown away. New and exciting things are happening; this is the only stage in the whole of education when the child is educated as a whole person, and his many interests can be encouraged.... There is a greater emphasis on the child learning rather than on the child being taught.... The new methods in the primary schools have shown how much more the child learns and how high his achievement can be if instead of being made to learn, the emphasis is on making him want to learn," Lady Plowden wrote later.

She anticipated criticism of the informal education method: "Some people, while conceding that children are happier under the modern regime and perhaps more versatile, question whether they are being fitted to grapple with the world which they will enter when they leave school. This view... assumes, quite wrongly, that the older virtues...of neatness, accuracy, care and perseverance, and the sheer knowledge which is an essential of being educated, will decline.... Society is right to expect that importance will be

attached to these virtues in all schools.... What we repudiate is the view that they were automatically fostered by the old kind of elementary education. Patently they were not, for enormous numbers of the products of that education do not possess them."

The report described the new informal education methods in terms of what they meant to the children being taught under them. "The school sets out deliberately to devise the right environment for children, to allow them to be themselves and to develop in the way and at the pace appropriate to them. It tries to equalize opportunities and to compensate for handicaps. It lays special stress on individual discovery, on first-hand experience and on opportunities for creative work. It insists that knowledge does not fall into neatly separated compartments and that work and play are not opposite, but complementary. A child brought up in such an atmosphere...has some hope of becoming a balanced and mature adult...."

The conclusion of the Plowden report was that informal education was the best thing that had happened to British primary schools in perhaps a century and that its extension to still more schools should be encouraged. Nevertheless, the Plowden report was not a how-to-do-it manual of informal education, but rather a compendium describing how it was done in various schools, so that each school could adopt its own approach to informal education. One thing the report did advocate was inservice training for teachers interested in informal education, especially for "heads" who, in most cases, actually taught classes where other teachers could watch them at work. "The willingness of teachers to experiment, to innovate and to change has been one of the mainsprings of progress in the primary schools," the report said.

British Informal Education Today

There are currently about 23,000 primary schools in England and Wales, with approximately 150,000 teachers. British primary schools are divided among infant schools, for children aged 5-7, and junior schools for those aged 8-11. After primary school, children attend secondary school until they are 16 or 17. Figures on the present extent of informal education are hard to obtain because schools interpret informal education differently. The Plowden report said one-third of all primary schools in 1967 were using informal education, one-third had adopted some of its ideas and one-third were still hewing to tradition. Later estimates suggest that 70% of infant schools and 40% to 50% of junior schools are centers for informal education.

As there is no grading in informal infant schools, there was some question about whether children taught the new way would adapt to traditional secondary schools. One study theorized that, since the use of informal methods had increased greatly in the 1960s, any change in the learning process would be reflected in the results of the General Certificate of Education Examinations (GCEE) taken by all British children at age 16. The results show that more students passed the GCEE, with higher scores, in 1967-68 than in 1960-61.

"One must look beneath the statistics, however, to find another kind of change," Edward Yoemans, an American private school educator, has observed. "Students from the 'new' primary schools are not the same as students who

come from traditional primary schools that prepared for the GCEE. The new breed of student is a more independent learner, who can follow up clues and resources on his own, or work effectively with others. He is also a student who is accustomed to communicating in various media, as well as words, and who is as much at home in a studio or shop as in a library or laboratory. He has drawn upon the whole school and the surrounding community for his information and has not been held to a syllabus within each subject or a schedule within each day."

Despite such opinions as Yoemans', some still ask whether informal education in Britain is actually better for all children. The debate is hampered both by lack of standardized measurements and by disagreement on the goals of education. There are many "true believers" on both sides of the Atlantic, nevertheless. Joseph Featherstone, who wrote a notable series of articles for the New Republic after visiting British schools, declared that informal education at the elementary level "stands children in good stead, whatever school they attend later."

Importing informal education is no easy matter. "Whatever achievement the English informal movement can claim for itself is due in no small measure to a system of dissemination of ideas and practices that is as deeply thought through, and as open, as the ideas and practices of the movement itself," Lillian Weber, innovative professor of education at the City College of New York, cautioned. "It is a system that joins, in common effort and tradition, everyone from the oldest heads of schools and the most inexperienced teachers to parents, members of Parliament and the press.

"Most important, perhaps, the dissemination has been a process of reciprocity between the practitioner and the researcher in a way that education in this country has seldom, if ever, experienced. It is, further, an enterprise made common at its core by a respect for children. It's likely that before the informal movement here can claim any semblance of permanence--of having acquired a foothold in the American education system--a mechanism for spreading ideas and demonstrating good practices much closer to the English model will have to be fashioned," said Lillian Weber, professor of education at the City College of New York.

WHAT MAKES A CLASSROOM INFORMAL?

"The basic difference between the traditional and the open classroom is one of structure," explained Harry S. Resnik, a journalist and former teacher, in the December 1971 issue of Today's Education. "The traditional is teacher-centered and, even at its most benevolent, authoritarian. Traditional teachers rely heavily on prescribed curriculums and lock-step advancement according to achievement testing. The main axiom of their educational philosophy is: Children must learn a given body of knowledge and they, the teachers, are qualified to direct children in absorbing that knowledge, preferably in a preordained sequence. These assumptions are reinforced by the physical arrangements of the traditional classroom. Usually desks are placed in rows, with students facing a teacher who instructs the entire class as a group and decides which children may talk at any given time.

"Some people insist that open classrooms, in contrast, have no structure and are utterly chaotic. In fact, they can get pretty messy at times, with too much noise and not enough learning--but these conditions are true of some traditional classrooms as well. At any rate, it's more accurate to say that open classrooms have structure, but that it's dramatically different from the structure of the traditional classroom.

"Having observed open-classroom programs in several places, including North Dakota, Philadelphia and New York City," Resnik said, "I found very little superficial differences among open classrooms in widely disparate parts of the United States. Most of the ones I've seen have large work tables instead of desks, for example, and the children keep their belongings in cubbyholes. There is no front of the room in the traditional sense. Upon entering an open classroom, one often has to look around for awhile to find the teacher, who may be sitting with a small group of students on the floor, playing a game or conducting a mini-lesson.

"Invariably the room is divided into separate areas, often called interest centers, each representing different aspects of the curriculum, such as science, art and language arts. In the best open classrooms I've seen, each of these areas is filled with thought-provoking learning materials. A language arts corner might have word games and books for a variety of reading levels. Other common items in interest centers include animals, plants, balancing and measuring equipment for math, Cuisenaire rods, games, blocks and sandboxes. The classroom is something like a miniature carnival," Resnik said.

"Children usually work independently or in small groups and are free to move about the room, talk to anyone, or explore the centers until they find

some project with which they can become really involved. Open classrooms tend to have a higher noise level than traditional ones, but one rarely hears the teacher's voice droning on and on in the chatter," Resnik concluded.

Dallas: New School Design=Lower Costs

New schools are going up at an extraordinary rate in the suburbs of Dallas, Tex., to keep pace with population growth. Most are open plan schools, designed to capitalize on the ideas of informal education. Two were ready for the 1970-71 school year; one opened in December 1970; four more were ready for the 1971-72 school year; others are in the construction or planning stages.

Taxpayers are enthusiastic about the new school designs, a local newspaper reported, because they have proved to be less expensive than the traditional school. The first new schools cost about $16.75 per square foot. Though costs have since risen to just about $20, this is still lower than the $25 per square foot cost of traditional structures. Included in the cost figure are carpeting, tinted glass, acoustical walls and ceilings, and portable bookcases for space division.

In the middle of each of the new Dallas area schools is a large open "resource center"--with upholstered furniture and audiovisual materials as well as a large book selection--and two multipurpose areas for group activities. "It took the children only about a week" to get used to their new school, said Justin Wakefield, the principal of one of the schools. "Then they began to discover they can do so many more things in this building."

"For a beginning, the students can have a lot more fun being students," an observer reported. "They can sit on the carpeted floor during class. They can dance and sing to their hearts' content during activities such as music classes in the multipurpose areas. They can curl up in a rocking chair with a good book in the resource center. Nobody frowns on such things, because that's how Wakefield and his teachers want the school to be used."

Statewide Innovation in North Dakota

North Dakota's informal classrooms "are in many ways more exciting, and certainly more innovative, than anything one can find in the Scardales, Winnetkas, Shaker Heights and Palo Altos of the United States," Silberman wrote in Crisis in the Classroom. In school districts in many different parts of that state children are experiencing more informal ways of learning under the guidance of teachers prepared for informal education practices. Impetus for the development came from the Center for Teaching and Learning, a small experimental unit of the U. of North Dakota in Grand Forks. (The center was formerly known as the New School for Behavioral Studies in Education.) Thirty-four of the state's 375 school districts participated in 1970 in the informal education program associated with the center, and the number continues to grow.

"It's quite a thing for this to take off as fast as it has when you consider how many programs of a demonstration nature never succeed in moving off

dead center," Kiaran Dooley of the North Dakota State Dept. of Public Instruction told the Wall Street Journal. "If we can't do it here, it can't be done anywhere," Kenneth Underwood, Fargo's superintendent, noted. "Our classes are relatively small and, compared to much of the rest of the country, we just don't have any financial or social problems here. There's no racial strife, and we don't have to negotiate with unions for every minute of our teachers' time."

No two informal classrooms are alike, but most share a number of common characteristics. There is emphasis on ingenuity and improvisation. Mimeographed math exercises sometimes contain no instructions; figuring out what to do is part of the exercise. Many of the first-grade reading materials are story books and stories the children themselves have made up and dictated to an adult. Frogs, fish, snakes, birds and animals are standard equipment. Cast-off sofas and battered easy chairs are common, along with rugs, pillows and cushions to make the floors more comfortable. There are gasoline engines, electric motors and an incredible variety of puzzles and games to take apart and manipulate.

In the first four years of the center's program, it has prepared over 500 teachers and has provided inservice programs for several hundred more. The teachers, preservice and inservice trained, learned among other things to make and build classroom equipment--usually out of heavy cardboard cartons and other cast-offs that run to only one-tenth the cost of similar unused materials. The cost of projectors, record players and tape recorders for the children was offset by savings on textbooks, since in the center's classrooms all children do not use the same text or workbooks at the same time.

Parents are an integral, accepted part of North Dakota's informal classrooms. They read to children or listen to them read, take them on field trips, or handle administrative chores that take up so much of the teacher's time in traditional classrooms. Parents in towns throughout the state have held evening workshops where the center's faculty members discuss the program's methods and goals, field questions and let parents work with the puzzles and equipment their children use in class. One workshop drew 100 parents to a school in Milnor, which has a population of only 658.

Outcomes of the program, school officials report, include an increase in attendance, a decrease in discipline problems, increased student interest and gains in reading, math and science.

Oregon: What Two Teachers Can Do

At the start of the 1971-72 school year, June Reid and Cheryl Hazelbaker, two intrepid teachers, decided to turn the three-grade, two-room Clear Lake Elementary School into an informal school. They were the only teachers in the Salem, Ore., school.

"We decided there had to be a better way than the structured classroom way," Mrs. Reid recalled. They looked into the British Infant School methods and visited one school in Oregon with informal classrooms. But they claim credit themselves for most of what they have accomplished. They call the approach the "Reid and Hazelbaker" method.

Their basic tenet was to give their 40 students a choice. Each child chose, from eight workshops, one language arts workshop plus one other--art, science, social studies, etc. In addition, each child completed one page from a math unit and one page of writing daily and had to read aloud to some adult at some time each day. (Parents pitched in to help furnish the informal classrooms and to help the two teachers run the classes by contributing special skills.)

Mrs. Reid and Mrs. Hazelbaker arranged their two rooms in two weeks' time before school started. One room became a quiet room, the other an activity room. The quiet room is full of reading material and several places for children to read, including "book tents" that the teachers made themselves. The activity room has an old sewing machine, record player, old radio parts, pieces of wood, hand tools, a piano and all sorts of art supplies.

Student-Directed Learning in St. Paul

In St. Paul, Minn., about 600 students from all parts of the city, voluntarily integrated, attend the year-old experimental St. Paul Open School. Located in a former downtown factory building, the ungraded school enrolls students aged 5-18. It started in the fall of 1971 when a proposal written by the Coalition for Better Schools (an organization of parents, teachers and other citizens) received $100,000 from the U.S. Office of Education, under Title III of the Elementary and Secondary Education Act, and a matching grant from the Hill Family Foundation in St. Paul.

Students select topics for study and other activities from a list of 10 major areas. There are no fixed requirements; in theory, a student could attend for 12 years and never study math, but this is highly unlikely, according to Wayne Jennings, the school's director. The first half-hour of each day is devoted to establishing the schedule for the day. All 17 teachers, the interns, paraprofessionals (about one for each two teachers), and student teachers work with the students as learning facilitators, friends and counselors. An elected advisory council of parents, teachers, students and community members helps with problem solving.

Instead of issuing report cards, the school holds three parent conferences during the year at which the student is present. Some children have had adjustment problems, Jennings says, but discipline problems typical of traditional classrooms are said to have vanished.

Three Approaches in One School

At the John B. Cary School in Richmond, Va., students are divided into three age groups. Each student is given responsibility for making decisions. Cary, a model school opened in 1970, has 364 students aged 5-11. It is racially balanced (49% white) with a wide range of religious, socioeconomic and academic backgrounds. Students at the ungraded school are grouped into 5- and 6-year-olds, 7- to 9-year-olds, and 9- to 11-year-olds. The youngest group moves from teacher to teacher on a regular basis for most of the day. The pupils have a choice of fine arts, performing arts or communications

class. The 7- to 9-year-old students rotate among four teachers for all classes. The oldest group is on a random access system. Each day these students check the bulletin board listing of regular classes, special films, speakers, panels and other activities for each period and select those activities that are of interest.

In addition, some of the students in each of the three groups are on a regular, assigned schedule and do not change rooms or teachers because they have been found unable to handle the free-choice system. In the middle group, students are allowed to stay longer in one class to complete a project "if they just let their teacher in the next class know," said Prin. Charles W. Gurkin. Because teachers prefer the freedom to devise their own methods, there is no uniformity in the classrooms, but many use the learning center approach. Teachers attend monthly inservice training sessions. When students in third, fourth and fifth grades at the school were tested, they equaled or exceeded the mean scores for similar grades in other Richmond schools. Attendance is among the best in the city. Twelve to 15 parents come to the Cary school each day to teach chess, chemistry, creative music, rocks and minerals, Indian lore, film making, photography, cooking, sewing, "smelling and tasting," the Civil War and life in the Congo. A Virginia Commonwealth U. student teacher explained what he liked best about the school: "It is not a building filled with children and adults, but a family--the parents trying many ways to benefit their young."

Older, Younger, Special Education Students Mix

The Paul A. Smith Elementary School, Franklin, N.H., opened in 1968 with one self-contained classroom--for the kindergarten--and 10 wall-less classroom areas divided by an open-space library and shelving on wheels that serves as partitioning. (The teachers feel the shelving is more of a hindrance than a help.) The school is staffed with two teams, each including four teachers, an aide and a clerk. There are 140 students in each of the teams, primary and intermediate. Students are grouped in "homerooms" by reading level, so the homeroom mix changes throughout the year. For all subject areas, students are matched individually with teachers, all ages mixing freely according to their achievement, interests and projects. Older students frequently tutor the younger ones, and the older slow learners are said to do well with younger slow learners. Morning classes are reserved for language arts and math, afternoon classes for science and social studies, but the timing is flexible to permit students to regroup for their next project.

The school's special education class is unique in New Hampshire. Psychotherapists and pediatricians plan individual programs around each child's particular disability. The special education group meets with the open group, and Richard Phelps, a teacher, says that many of the other students go through an entire year without realizing who is in the special education class.

Some students find the open space plan confusing and do not respond to the informal teaching; study carrels are available for them. Students who cannot tolerate the high noise level because of minimal brain damage wear noise-shielding earphones. Some students who were enrolled previously in

traditional classes experience many adjustment problems, but once teachers earn their confidence, they adapt well, school officials report. Students who have experienced no other teaching method fit in right from the start, they add.

A few tests are given, e.g., the Stanford Achievement Test and the Marion-Frostig Learning Disabilities Test. Report cards show three ratings: the child's self-evaluation of behavior and achievement, competitive rating (above average, average, below average) and an individual score (effort marks, etc.). The competitive rating was requested by parents. Reports are issued as needed, some weekly, some as infrequently as twice a year. Parents or students may request a report card at any time.

After the initial semester, discipline problems have been few. The primary discipline methods are positive reinforcement, counseling and, for chronic problems, weekly report cards. Teachers found that children with behavior problems controlled themselves better when they had to rate their own behavior each week. Counseling by teachers helps students recognize problems early and overcome them. For example, upon recognition of frustration, students are encouraged to try something else for a while. They usually tackle the original task with more enthusiasm after such a pause.

The Research Institute for Educational Problems, Cambridge, Mass., is evaluating student and teacher attitudes at the school. Smith has the lowest absentee rate in the community, and its students are doing as well at the junior high school as those from the other two traditional feeder schools. Although students leaving Smith have complained of the rigidity of the junior high school, they seem to adapt well. Former Smith students are also reported to have more outside interests than the other junior high students and to get more involved with what they are doing. One problem: the junior high teachers have asked the Smith teachers not to give junior high work to their pupils.

Rochester: Learning Through Involvement

The National Science Foundation gave David Elkind, an experimental psychologist at the U. of Rochester, $75,200 to study the World of Inquiry School in Rochester, N.Y.--especially its impact on the social and intellectual development of its inner-city students. The World of Inquiry School, now part of the Rochester public school system, was opened in 1967 with funding support from the U.S. Office of Education. The school, which "seeks to improve development through effective education in an informal, culturally balanced environment," enrolls 200 students of diverse backgrounds. It is organized around family rooms and interest centers. The students are divided into three groups: 3- and 4-year-olds (preschool); 5- to 8-year-olds (primary family rooms); and 9- to 11-year-olds (intermediate family rooms).

Students learn mathematics, reading and language arts in the family rooms. The interest centers are organized around activities--music, science, art, drama, social studies, physical education and technology--where students are not grouped by age. The World of Inquiry School is based on two tenets: "Learning takes place best through the active involvement of the students" and "Factors in addition to age should be considered in grouping students."

'Truncated Octahedrons' in Southern Illinois

At Avery Coonley School, a well financed private school in Downers Grove, Ill., one room is divided into 24 five-foot honeycombs where primary grade pupils can get away from their teachers and classmates for individual study during the day. These "learning spaces," as they're termed at Avery Coonley, are equipped with carpeting, a drop-down chair, collapsible desk and light. Students can decorate their carrels as they please and have visitors if they like. Some faces of the 14-sided learning spaces are open for crawling in and out and for talking with teachers and classmates. The truncated octahedrons have been a great success. Students say they enjoy being able to work in privacy and they prize control of their own chunk of space, however small.

Matching Students and Teachers in Mankato

Informal education brought 63 changes to the Wilson Campus School at Mankato (Minn.) State College. The most important, says the school's former director, Don E. Glines, is that students are allowed to select their own curriculum, advisors and teachers, starting as early as age 5 or 6. "Learning occurs if there is a good relationship between the teacher and the student," he says. Wilson, serving prekindergartners through twelfth graders, is open all year, and students determine their own attendance periods and select their courses from "advertisements" of various programs and projects. Each student has a teacher-advisor to work with, and no teacher counsels more than 15 students, which permits many 1 to 1 relationships. Students range in age from 3 to 18. The very young ones spend time in an early childhood center until they mature enough to enter the mainstream, where each child works at his own pace in his own program, the youngest sometimes working in the same place as the oldest. At first, older students objected to having the young ones under foot all the time, but eventually the age difference became a source of mutual enjoyment and benefit. Now the older students often tutor and play with the younger ones.

Some students, usually those with previous experience in traditional classes, have found it difficult to take responsibility for use of their time. Donald E. Sorenson, acting director, said there were many disciplinary problems in the first year--vandalism, fighting, etc.--but since then the improvement in behavior has been "startling." Halfway through the 1971-72 year only three discipline cases had been referred to the administrator.

At intervals, the student and the teacher he has selected to work with for the coming two or three months jointly set their goals. A copy is sent to the student's advisor. When the goals have been met, or at the end of a certain period of time, the teacher and student make out a joint report. The teacher and advisor can make additional comments, and the report then goes to the parents.

At Wilson, affective development has been assigned as much importance as cognitive development. Emphasizing psychomotor development, too, Wilson considers physical education, industrial arts, home economics, art, music

and even typing as important courses, especially in the primary years. Older students have had no trouble gaining admission to college. Per-pupil expenditures are said to be in line with those of comparable schools, though perhaps a little higher for curriculum materials because of the innovative program. "We cannot prove that Wilson's is the right program; yet neither is there proof that it is wrong," Glines commented.

Continuous Progress in Minnesota

Two elementary schools in Minneapolis, Minn., are participating in a K-8 informal education program. Children aged 5-8 attend Pratt Elementary School and those aged 9-12 attend Motley Elementary School. About 445 children are in the program, which permits children to finish elementary school work in five to eight years. Children move at their own rate, advancing as they master each subject rather than being promoted from one grade to the next.

The Continuous Progress Elementary Program, as it is called, is committed to mastery of basic skills, but afternoons are open for students to choose their own studies. At Motley, for instance, offerings include The Color of Man, Exploring Human Differences, Creative Dramatics, Stitchery, Microbiology, Experimental Geometry and Pottery. Parents help teach the afternoon courses. Morning classes in language arts and math are taught by teams of teachers, with the children divided into achievement groups.

Two Systems Share a School in Portland

In Portland, Ore., the experimental Metropolitan Learning Center shares a 46-year-old building with Couch Elementary School, a traditional K-8 school of the same size, 210 students. Thus the two can compare techniques under comparable conditions. Both use the same workshops, home economics room, library, gym and audiovisual equipment. But students of the Metropolitan Learning Center have a bigger campus: the city.

Students, especially the older ones, are encouraged to spend a great deal of time at outside learning stations, which include a local university, corporate and professional offices, radio and TV stations, museums, hospitals, the zoo, courthouses and police stations. To explore the city, the Metropolitan Learning Center has three van-type buses.

At the school itself, some 200 multicourses are offered each year to all students for a short time; each pupil arranges his own schedule by using an annual catalog and supplements issued every three weeks. The courses, which range from Primary Reading to Soft Pack Making, are taught in brief periods by students; essentially they are individual or group study projects.

Although it is technically optional, students under 10 receive two to five hours a week of regulary scheduled individual tutoring in basic skills from a staff member or an older student called a "learning partner." Despite its unconvential atmosphere, the Metropolitan Learning Center claims that it "functions within the limits set by the school board for the operation of all the schools within the city."

SETTING UP AN INFORMAL CLASSROOM IN A FORMAL SCHOOL

Obviously, the variety of informal education programs is so great that limits are hard to define. Basically, informal education stems from the conviction that children can give direction to much of their own learning. They require only the right environment, a broad range of materials, and teachers and administrators who are willing and able to work with them.

"No informal classroom looks much like any other," a U. of North Dakota publication, Insights, explains. "A visitor may see tables used in one room, desks pushed together in another, or a combination of the two. Cardboard room dividers may be highly popular. Children's work might be displayed on bulletin boards, walls, desks, room dividers or hung on strings from the ceiling. One...class recently placed a small tree in the middle of the room; another built a teepee capable of accommodating several people. Still another uses the shell of an old television set to display its collection of tropical fish. The fish tank replaces the picture tube. Yet common to all the rooms, in one form or another, are interest or learning centers, places where children can do their work individually or in small groups. In some rooms, these centers may be spotted easily or be clearly marked 'Science Center' or whatever. In others, they may not be as apparent."

A typical math area of a British Infant School has been described by Silberman in Crisis in the Classroom: "Several tables [will be] pushed together to form a large working space. On the tables, in addition to a variety of math texts and workbooks, will be a box containing rulers, measuring tapes and sticks, yardsticks, string and the like; other boxes containing pebbles, shells, stones, rocks, acorns, conkers (the acorn of a chestnut tree), bottle tops, pine cones and anything else that can be used for counting, along with more formal arithmetic and mathematical materials, such as Cuisenaire rods, Dienes blocks, Stern rods and Unifisc cubes. There will be several balance scales, too, with boxes of weights, as well as more pebbles, stones, rocks, feathers and anything else that can be used for weighing."

More elaborate informal classrooms may include in their math area sandboxes or water tables where students can fill and empty an assortment of cans, jars, bottles, pans, trays and containers of all sizes and shapes. These tables are used for experiments in volume. With these math tools, students use their abilities in reading and writing as well, as they record their findings and chart relationships graphically.

"Major differences can be found in the way in which teachers organize and use learning centers in their classroom," Insights points out. "It is important to keep in mind that there is no best method of making use of cen-

ters.... Some teachers use centers for a specific period of time each day. The children are asked to select the center they wish to work in, and the teacher generally moves from center to center working with various children. In these classrooms the centers are used as supplements to the regular instructional program.... Other teachers generally divide their time between conducting small group lessons, working with individual children in centers and directing total class activities.

"The number and kind of centers found in a classroom will be determined largely by the goals of the classroom and the relative importance of independent work in centers to the achievement of these goals. In classrooms where centers are used as supplements to the regular instructional program the number of centers will be limited by the amount of available space. The need for one large instructional area in the class leaves only a small amount of space for setting up centers. On the other hand, in classrooms where most of the children are working in centers most of the day, only a small group instruction area need be provided. However, it is helpful to have an area in the school large enough for class meetings. This might be the book center if it has a rug on the floor, or a special area can be provided for this purpose.

"The variety of centers found in classrooms is limited only by the imagination of the teacher. Typical centers found in classrooms include book or library center, creative writing center, listening center, language arts center, drama center, math center, cooking center, sewing center, science center, social studies center, art center, music center, block center, game center, puzzle center, water center, sand center, dream center and carpentry center. It would be rare, if not impossible, to have all of these centers in a single classroom at the same time. Many teachers will combine some of the centers listed above to provide a wide variety of possible experiences with five to eight centers. It is quite common for a classroom to have some centers set up at all times and to rotate others. It is also fairly typical for some centers, such as the science and social studies centers, to focus on a theme for a period of time."

In each learning center, materials are kept in cardboard cartons on small racks or bookshelves so children have at hand what they need. To encourage mobility, there are rarely as many desks or chairs as there are students. Hence it is usually unnecessary to buy new furniture. Storage space is open space, materials are not necessarily put away when a period ends and books are not stored to be used only with certain projects. A key to the informal classroom's flexibility, in short, is availability of materials. Space is provided, however, for children to store their personal things, since they do not have assigned desks. The customary arrangement is a wall of shelving with plastic washtubs, each labeled with the child's name. This also gives each child a portable container for his things. Children don't seem to need a chair and desk to call their own. When they are told the entire classroom is theirs, they are satisfied, according to the experience of the British Infant Schools. Perhaps the fact that the teacher does not label any area "off limits" keeps the children from needing to identify any area as personal and private. "In a classroom where the books, the class pet, the reading and math corners, and so on, are the property of each child in the class...the child is more likely to feel that learning also belongs to him," state Casey and Liza Murrow in their book, Children Come First.

The Art Center

Alvin Hertzberg and Edward F. Stone, in their book, Schools Are for Children, present very specific advice on creating the informal classroom. Their suggestions for the art center, for example, are virtually lesson plans for an art course:

1. "Give children the opportunity to paint with powdered paints. Give them large brushes. Have them paint directly on newpaper, on large sheets of newsprint, on colored construction paper, on oaktag, etc. Let children choose from a variety of papers. Encourage children to mix colors. What colors result from the mixing of powdered paints? What hues? What textures are possible that cannot be obtained with tempera? What effects can you get when you build colors, one on top of another? Encourage experimentation, discovery, finding out, trying out, inventiveness.

2. "Give children the opportunity to paint and draw with a variety of other media: crayon, pastel, watercolor, India inks, colored inks, ballpoint pens, pencils, colored pencils, charcoal, tempera, acrylics. Encourage them to find out what it is they can do with the material at hand. Encourage them to try out the medium on various sizes and shapes of different papers so they discover something about the relatedness of form, function, material and style.

3. "Create an 'Available' table. Ask the children to help you collect shoeboxes for the table. Fill each shoebox with materials that will be constantly available for children's use. Here are examples of what can go into the shoeboxes:

colored chalk	toothpicks	colored pencils
magic markers	paper cups	tongue depressors
India inks	glues	colored string
pens	macaroni	masking tape
yarn	doilies	Scotch tape
watercolors	cotton	scraps of colored paper
beads	scissors	scraps of cloth

4. "Work with the children to develop charts that suggest ideas for painting. Help children to know that their own ideas come from a range of experiences. Encourage children to keep suggesting painting ideas as stimulation for others. One such chart might read:

Ideas for Painting

myself	my family
my teacher	a favorite thing
my school	animals
my home	flowers
my neighborhood	designs

Another chart might read:

Color Ideas	
happy colors	new colors
sad colors	important colors
bright colors	favorite colors
scary colors	

5. "Encourage children to create mosaics. They can work individually on designs, figures, landscapes, etc. They can work as a team or in small groups. They can create small or large murals or wall decorations for the classroom. Mosaic pieces or 'tiles' can be created from almost anything. Squares can be cut from colored construction paper, from magazines, newspapers, tissue paper, fabric, typing paper, wallpaper, Christmas cards, cereal boxes and so on. Scissors and paste are all that they need to transform random scraps into exciting pictures, abstractions and designs. Glue can be used for sturdier tiles. Again, encourage the children to use their imaginations as to what they might use on the mosaic: glass, stone, seeds, straw, feathers, macaroni, dried fruits, flowers, shells, grass, fur, buttons, string, bark, bottle caps, sponge pieces, wood shavings, wood chips, styrofoam chips, plastic, cellophane, pebbles, steel wool, dried seaweed, netting, etc.

6. "Encourage children to bring in a variety of 'found' objects and to create beauty through their own inventiveness. Help children to know that beauty can be found in many places and created in a variety of ways through observing, planning, arranging, rearranging, combining and altering. Help children set up imaginative displays of--

   - Waste and junk materials such as egg cartons, hardware, excelsior, cardboard cartons, shoeboxes, paper bags, plastic bags, shoelaces, tin cans, bottles, floor tiles, rug scraps, wheels, pill bottles, packing crates, old toys, book jackets, a broken radio, a discarded typewriter, a worn-out dog collar.

   - Natural materials such as driftwood, shells, soil, nests, leaves, dried leaves, acorns, flowers, roots, chestnuts, twigs, stones, pine cones, vegetables, fruits.

   - Products of technology such as plastics, tape reels, film, film rolls, gears, skate wheels, steel cable, wire, eyeglass frames, electrical plugs, sockets, typewriter ribbon spools, screening, old phonograph records, toothbrushes, batteries, paper clips.

7. "Help children to observe all these materials and to feel them. What can they learn about shape, design and texture? How can objects like these be arranged in beautiful ways?"

Hertzberg and Stone have six other ideas for art center projects, as well as suggestions for every other center in an informal classroom.

The Science Center

Hertzberg and Stone emphasize that each child learns best when he learns on his own, as exemplified in their suggestions for the science center. They recommend, for example, that a science center have all the equipment for a static electricity project, plus a packet of independent investigation cards. The children can use the cards to learn about static electricity, without the aid of a teacher. The cards might read as follows:

> Science Experiment 1: Blow up a balloon. Make a knot where you put in air. Put the balloon on the wall and let it go. What happens?
>
> Science Experiment 2: Rub the balloon on a part of your clothing. Put the balloon on the wall again and let it go. What happens to it? Make a picture of what happened.
>
> Science Experiment 3: Work with a friend. Blow up two balloons. Make a knot in each balloon where you put the air in. Rub each balloon on pieces of clothing like a sweater, pants or a skirt. Rub the balloons a lot. Will the balloons stick to a wall? To the chalkboard? What else will the balloons stick to? Each time you try, remember to rub the balloons again. Make a record of what happens.
>
> Science Experiment 4: Do this work at home. Ask someone to help you. Get a rubber or plastic comb and some rice krispies. Put the rice krispies on a clear table. Rub the comb with a piece of wool. Put the comb near the rice krispies. Does anything happen? Try the same thing with some other very small things in your home. Make a record of what you find out.
>
> Science Experiment 5: Do this at home when the weather is cool and dry. Walk on a piece of rug. Rub your feet as you walk. Put your finger close to a doorknob. What happens? Walk around the rug again. Bring your finger near other things at home. Make a record of what happens.
>
> Science Experiment 6: Put a piece of writing paper on a table. Rub it flat on the table. Each time you rub it, start in the middle and rub to the edges of the paper. Rub it a lot. When you are finished, lift up one corner of the paper slowly. Do you feel anything in the paper?

The static electricity project suggestions are as numerous as the art project suggestions. As a conclusion, the student is asked to explain the phenomena he has observed. This is the way Hertzberg and Stone believe informal classroom centers should be used.

Language Arts Center

Richard Hanson, a doctoral candidate at the Center for Teaching and Learning at the U. of North Dakota, offered this description of a language arts center in an issue of Insights:

Purpose: to provide children with the opportunity to increase their communication skills, especially in the areas of spelling and reading, through the use of self-directed learning activities.

Materials and equipment:

- Reading and spelling games--commercial and homemade
- Filmstrips, tapes and records related to reading and spelling; reading skill kits
- Teacher-made reading and spelling activities mounted on tag board or file folders
- Pocket charts with picture, letter and word cards
- Individual flannel boards and chalkboards
- Manipulative devices for developing visual discrimination
- Puzzles
- Linguistic blocks
- Printing press; other printing devices
- Typewriter
- Pictures for classifying
- Dictionaries
- Sheets of acetate and marking pencils

Young Authors Learn To Read and Write

The following description of an informal classroom exemplifies how children can teach themselves to read and write. In this classroom, 5-, 6- and 7-year-olds work and study together. Each child keeps a book of his own activities.

The youngest children use their books to draw daily pictures, either on suggested subjects or any that strike their fancy. Each child has a chance to discuss with an adult the story his picture tells. After a few weeks, the adult volunteers write down, on a page facing the picture, the simple descriptive sentences dictated by the child. At subsequent sessions, the adult or the child reads the previous descriptions--the child from memory, the adult from the script. Soon the adult suggests that the child trace over the letters and words or copy them elsewhere on the same page.

Later, the adult suggests that the child write his own description of his picture, using words that appear opposite other pictures. Neither grammar nor punctuation is considered important during these first attempts, and nothing is made of the fact that the child is actually reading and writing. What has happened, essentially, it that the child has created his own primer, using his own vocabulary, and has taught himself to read and write.

This approach does not work with all children and should be supplemented by other reading materials. It has been found effective in some British Infant Schools.

Suggested activities:

- Play games.
- Work puzzles, crosswords.
- View filmstrips; listen to tapes, records.
- Work with manipulative devices.
- Work with word cards to expand sight vocabulary.
- Create sentences and stories with word cards.
- Work in reading skills kit--commercial or teacher-made.
- Print sentences, signs, posters and stories with printing press.
- Type words, sentences, or stories
- Classify picture and word cards under headlines.
- Create words and sentences with linguistic blocks.

The Mathematics Center

Hanson has also described a mathematics center:

Purpose: to provide opportunities for students to develop their quantitative thinking abilities by interacting with materials and questions relating to mathematics. Emphasis should be placed on independent activities involving manipulation of materials and exploration of questions by students.

Materials and equipment:

Measuring devices--scales; thermometers; tape measure; rulers; spoons; quart, half-quart, gallon measures

Books about mathematics

Job cards, worksheets in plastic envelopes, geo-boards, kits or instructional packages

Counters--blocks, beads, sticks, buttons

Games--commercial, teacher-made or student-made

Puzzles, magic squares, playing cards, bead frame, Cuisenaire rods, number lines, math balance, play money, clocks or clock faces

Suggested activities:

- Manipulate objects: count, classify, measure, play.
- Play mathematical games.
- Work puzzles.
- Complete job cards (using materials in the center).
- Complete worksheets.
- Read books about mathematics.
- Make up job cards and magic squares for use by other students.
- Invent mathematical games and puzzles.
- Work activities in a unit or kit.
- Play with bead frame, Cuisenaire rods, clocks, play money, geo-boards.

THE TEACHER IN THE INFORMAL CLASSROOM

Informal education assumes that the child can teach himself if he is given the right kind of guidance, its supporters point out. In the informal classroom, it is up to the teacher to provide the necessary guidance. "We try to teach concepts, not skills," a Maine teacher has explained. "The teacher is just a reference, and the actual stimulus comes from the child himself and his natural curiosity."

A principal in Texas has described his approach to informal education this way: "We're trying to get away from the old concept of 'everybody do page 42 in the math book.' We begin with the idea that every child is teachable, and we encourage our teachers to look at better methods of teaching. Some children are visual learners, for example, and some are not. It's our job to figure out how a child learns best."

Pressures on informal education teachers are far different from those in traditional education. Often the pressures are unforeseen, which may frighten away teachers who would be effective in an informal classroom. The approach used in informal education is not as strange as it first appears to the teacher, Richard Hanson says. The major difference between teaching in an informal classroom and in a traditional classroom, he says, is one of emphasis rather than fundamentals. To illustrate, the informal education teacher spends more time with individual students and less time with the class as a whole.

Charles Silberman, one of the country's leading proponents of informal education, believes the informal classroom teacher has a more manageable job than the teacher in the traditional classroom. "No teaching is easy," he has written, "but teachers of every type--ordinary, garden variety teachers, as well as superior ones--are able to function well in open classrooms." Why? Silberman thinks it is because teachers no longer need to have all the answers or to be the source of all knowledge; in informal classrooms students are required to provide many of their own answers. Also, no longer must the teacher try to juggle advanced and slow students in the same class, the same subject and the same lecture; students group themselves according to interests and abilities, as they choose the "interest centers" they will work with each day. Finally, Silberman believes that informal education alleviates discipline problems by fostering better self-discipline.

John Blackie, author of Inside the Primary School, likens informal education to the Socratic method, in which teachers draw understanding out of students by questioning rather than forcing it in by lecturing. The teacher, according to Blackie, can still require memorization, but this should be preceded by understanding.

When a student knows why he must learn something, he will be more willing to learn it, Blackie says. Children waste less time in the classroom when they "supply...their own current," he has written. An informal education teacher agrees: "Children basically want to learn and are interested in finding out about the world. And common sense tells us that a certain portion of the day needs to be spent by young children mastering the basic skills in math, reading and writing. But these activities can be made more interesting by tying them in with the interests of the child."

One teacher did this by encouraging his class to build a clubhouse for the school. The students, absorbed in the project, were hardly aware that they were learning mathematics by measuring, buying and cutting the lumber; reading by finding designs and following plans; and writing by creating stories, poems and other celebrations of the finished project.

It is a mistake to believe that informal classrooms are turned over to the students or that teachers do not provide them with a framework for their learning, supporters of the concept contend. In informal education, the teacher sets up the learning environment and then becomes part of it. Teachers pick up the theme of knowledge or skill chosen by the students and then interest and guide them in getting the facts or competency they need. For this reason, proponents assert, the traditional tools of coercion and reward --tests and grades--are not needed to stimulate learning by the child in the informal classroom.

The informal classroom teacher guides her pupils gently but firmly, although not in an authoritarian way. She structures an environment in which the child can be constructively independent. He must have a wide range of options and must make choices freely, but his choices are, in the end, guided by the teacher who has set the options before him. This subtle management by the teacher is the difference between informal education and the traditional progressivism of John Dewey so popular a half century ago.

More Work or Less?

The hubbub and apparently unstructured activity of the inform l classroom may lead the observer to the mistaken conclusion that the teacner provides little direction. "From a practical point of view," says Dorothy Day, a college instructor in informal education methods, "if you are going to teach in a free way you must be better organized than if you teach in an unfree, traditional way. There is no sequential structure in the curriculum, but the teacher must be aware of the curriculum possibilities to which each experience can lead."

In the informal classroom there is no single syllabus for all the students of a class. The teacher must keep up with the curriculum possibilities of each experience, not only for the class as a whole--as did the teacher who encouraged the building of a clubhouse--but also for each individual student. For the teacher in an informal classroom to ignore the possibilities of building on any one student's experiences is to deny that student a chance to develop in his own way. Thus the informal education teacher's job is "infinitely more difficult than that of the traditional one, for he must always

know what each of his students is doing and must have the wisdom to help each develop his own interests and ability to work on his own," education journalist Harry Resnick has written.

It is hard to keep up with children going at top speed, but most teachers in informal classrooms agree that it is rewarding. "I used to think I knew my children," a teacher told Karen Branan, author of Teaching in the Open Classroom. "Now I really do. I've had to learn different ways of talking with them, individually and in small groups. I see them in so many ways, experiencing so much. Now I have time to listen. Really listen. I've also discovered that learning doesn't end when school does."

Record Keeping

The record-keeping of the informal education class charts individual achievement in the traditional skills: math, reading and writing, science, geography, etc. The teacher usually keeps a record of how long each child spends on a task, and whether he is working in an interest center or in a workbook. She keeps a record of the kinds of activities each child seems to favor, from which she can determine learning styles as well as gaps in academic progress. There are also simple records of completed work, books read, projects finished--all determined by observing students, not by testing them.

An achievement record may look like this one, taken from a British teacher's notebook recording the academic progress of a 7-year-old:

Sept. 17--Writing one-line sentences to own drawings; dictated story to aide about walk in woods.
Sept. 21--Reading diagnosis--needs practice with endings 'ing', 'ed' and 'es'; group with Millie for this.
Sept. 25--Math--equivalencies on balance; worked 1 hour. Arts--dramatized story of Three Bears to reception group. Writing--watch letter formations.
Sept. 28--Reading--progress with endings, still needs help.
Oct. 4--Math--measurement jobs M-1 to M-7; needs practice reading ruler.
Oct. 8--Reading--good progress in endings; choosing good variety: 'Alfred's Puppy', 'Mums at Work'; reads 30 minutes.
Oct. 12--Writing--has not written in diary this week; watch on Monday.
Oct. 15--Writing--worked with James, wrote story together; still unhappy about writing.

Many informal education teachers also keep track of each child's behavior and social development. This practice follows the thinking of many informal education advocates who stress that schooling is a process of socialization as well as of education. The teacher makes note of incidents contributing to the social development of the child on a second type of record--the general behavior record. Following are examples taken from a British Infant School of the teacher's entries on the general behavior record:

Sept. 17--Donald S. has a new baby sister, born yesterday. Dolly helping younger children put on boots. Charles' dog had nine pups during the holiday.

Sept. 18--William B. visited father in hospital. Trip to continent a highlight of Theresa's summer holiday.
Sept. 25--Bruce in bad mood for two days, older brother left home. William R. stopped coming (to teacher) when he quarrels with Michael.
Sept. 28--Evan's teasing causes Frieda to take a poke at him. John tends to bully others during outdoor times. Clive beginning to clean up regularly when done.

A third type of record is a class record, which is more of a help to the teacher than to the student. In this the teacher records what the class as a whole has done, shown interest in or rejected when it was offered. This record can help the teacher avoid staleness or lack of variety.

In addition to teacher records, students are often asked to keep logs or diaries. Each child is asked--but not forced--to write in his diary every day what he did that day. It is a valuable record for the teacher, not only of what the students did, but of what value they put on it. They are urged to comment on their activities. There is little padding of these logs by adding activities or exaggerating progress because students in informal classrooms are not rewarded for the time spent on each project nor for the number of projects completed per day.

These records are supplemented by regular conferences between the teacher and each student. They give the teacher a better idea of what works and doesn't work with each child and also make the child more responsible for his own education. By taking seriously the child's own ideas about the effectiveness of his education, the teacher is helping to make the child responsible for taking seriously his own education. Teachers also have regular conferences with parents and with colleagues, the former to give them an additional perspective on each student's progress and needs, the latter to help develop new ideas for the classroom and new approaches to education.

Record keeping admittedly takes more time in informal education programs than in traditional programs, especially in the beginning. The first two years are the most difficult, according to Don Glines. "Most schools initiating informal education have been able to make the additional record keeping flow into the regular work," Glines said. "Wilson School is now a whiz at record keeping (compared to three or four years ago) and it no longer drives us crazy," he added.

What the Teacher Does

The informal classroom teacher is expected to be actively involved in what goes on in the classroom. The learning environment includes the teacher --she is a resource utilized by the students as freely as they use the library or the science center.

Activities in the informal classroom revolve around the teacher; they do not come from her. However, the teacher is essential in the informal classroom since she provides the underlying structure for all activity and exerts subtle control of all learning. The teacher guides and teaches the

children in the informal classroom by asking questions and posing problems for the children to solve--using, essentially, the Socratic method. The informal education teacher also answers questions or helps the students find their own answers. She is not so rigid that she insists that students do all their own work, nor is she so ready to be the expert that she does not let the students find things out for themselves. The teacher suggests activities to individual students and to groups of students. The informal education teacher corrects errors--constructively. She urges students to pursue their own ideas and provides the materials, time or other aids necessary to help them. The teacher keeps records and makes plans for individual and group learning in the classroom.

The teacher structures the physical environment in the informal classroom. She sees to it that materials are available in the quantity and quality necessary for her students. She constantly reviews the materials in the classroom to determine what is being and is not being used--and why. Unused materials may be inaccessible or located where they compete with more popular materials. The teacher learns how to use classroom equipment so she can be comfortable instructing students in its use.

The teacher is responsible, as are all other teachers, for order in her room. She decides what is acceptable and unacceptable, makes her standards known and understood by her students, and enforces them when necessary. By keeping up with the children in her classroom, the informal education teacher is able to step in and change a situation before it leads to acting up. In the British Infant School, there are only two rules: "No destroying equipment" and "No destroying or interfering with the work, play or activities of other children."

The teacher in an informal classroom usually finds fulfillment in her work, informal school supporters claim. Why? Because she is so close to each of the students that she can see the results of her work and is less frustrated. Informal school authorities add that "open education is only for teachers who are willing to make a basic commitment to working with children in this way."

Training Teachers for Informal Classrooms

Just as there are no specific guidelines for establishing an informal elementary or secondary school, there appear to be few for establishing teacher training programs designed to "turn out" teachers for informal classrooms. Most informal education advocates agree, however, that some special training is needed if the teacher in an informal education classroom is to achieve maximum results. "It takes a special sensitivity to know when and how to intervene, when to propose a new task, when to join and when to stay away from a child's activity--in all, more knowledge of subjects, greater familiarity with learning materials and more understanding of child development than most teachers get in their own education," a Ford Foundation publication has observed. "Even the most secure and imaginative teachers need specific preparation and sustained support to work successfully in open classrooms."

The schools of education questioned about their training programs for future informal education teachers indicated they were moving rapidly in the

direction of student-oriented, student-selected curriculum with the faculty of the school providing maximum direction and support for the student.

Most schools provide opportunities which will introduce the prospective teacher to the classroom and the children in those classrooms at the earliest possible time--preferably in the freshman year and never later than the beginning of the second year. Students may serve as teacher aides, tutors, administrative aides, cafeteria workers, playgound supervisors and in other capacities which expose them to all aspects of school life. This early experience with children and the school is aimed at preventing a frequent occurrence in the past--a student spends three and one-half years in a rigidly prescribed academic curriculum only to find during the traditional student teaching period that working with children in a school situation does not appeal to her or that she is not suited for it.

Few schools require the rigid training program of the past. Almost all allow a student to select as many courses as her interests dictate although she must still take a prescribed number of hours in certain fields. Each field, however, offers many alternatives. Most school officials interviewed for this report said they felt the wide latitude now offered students majoring in education will affect how the students handle their own classrooms when they become teachers.

The schools mentioned below all offer innovative training programs for the prospective informal education teacher:

U. of North Dakota, Grand Forks, N.D.: The Center for Teaching and Learning at the U. of North Dakota is among a handful of preservice teacher training institutions that offer preparation for informal education. Undergraduate and postgraduate students not only study the principles of informal education; they are also taught by informal education methods. "Teachers teach essentially as they have been taught," Dean Vito Perrone says. At the school, consequently, the faculty "is continually seeking ways to personalize and individualize the university level program, placing the student at the center of the learning experience."

The center has involved about 20% of North Dakota's school districts in informal education. As experienced teachers take sabbaticals for retraining at the center, substitute teams of recently trained teachers are sent to work in their school districts under the university's supervision. This enables a district to retrain its teachers en masse and smooths the way for the returning teachers.

U. of Massachusetts, Amherst, Mass.: offers 21 alternatives in its teacher preparation program for elementary and secondary teachers. Three programs, Marks Meadow, Alternative School and Exploration, stress preparation for open classrooms. One of the programs bears the description "for those who'd like to teach outside the established order." The areas of concentration of the three programs vary. For instance, one or more of the three programs feature the following:

- Work with two pupils, a boy and a girl of different ages, to gain knowledge of child development and learning.

- Introduction to a wide variety of careers through observation and discussion.
- Twenty-six days at sea in an Outward Bound training program.
- Courses for which students share responsibility with professors.
- A one-year program with no fixed blueprint. Students are totally responsible for their own education--for making their own choices and living with the consequences.
- Full-semester student teaching experiences where the traditional "methods" courses are taught as an integral part of the teaching experience.

For more information, write Dwight Allen, Dean of the School of Education, U. of Massachusetts, Amherst, Mass. 00102.

U. of North Colorado, Greeley, Colo.: offers training to prospective teachers in the campus laboratory "open" school which serves grades K-12. Students are offered "continuous, direct, diversified, clinical experience" beginning no later than the sophomore year according to Bruce Borderius, director of the program.

The School of Educational Change and Development--a recent addition to the campus--allows students to select their own advisory board and their own program and, upon reaching pre-stated goals, to ask the advisory board to recommend certification from the state education department.

For more information, write Bruce Borderius, School of Education, U. of North Colorado, Greeley, Colo. 80631.

U. of Vermont, Burlington, Vt.: stresses early observation and participation in the educational process. Students are encouraged to select their courses from a wide range of alternatives and to participate in a new research center where students and faculty exchange ideas and work together on projects. In seeking placement for students in the intern teaching program, the college looks for "schools where trust exists and common goals are shared." Student teachers are sent in groups to areas where such schools are located. They live together with a resident advisor who assists them in their teaching assignments. A graduate program offers continuing education and experience for teachers concentrating on the development of "openness" as adults.

For more information, write Frank Watson, College of Education, Teacher Education, U. of Vermont, Burlington, Vt. 05401.

Virginia Polytechnic Institute, Blacksburg, Va.: VPI has recently revised its teacher training program in an effort to bring about closer and more intensive contact between prospective teachers, school-age children and the educational community. A prerequisite for entering the program is 4 hours of work with children at the grade level the student would like to teach. The school of education is involved in an active search for potential cooperating schools which are innovative and interested in investing time and effort in the teacher preparation program, a VPI spokesman said. A two-year internship

model finds the student in a student teaching assignment for his fourth year and as a paid member of a differentiated staff in the fifth year. Methods courses are taught in conjunction with the student teaching experience to enable the student to develop techniques which fit his individual situation rather than relying on a textbook version of the "average class."

For more information: Wayne Warner, Division of Curriculum and Instruction, School of Education, Virginia Polytechnic Institute, Blacksburg, Va. 24061.

Mankato State College, Mankato, Minn.: offers prospective teachers the opportunity to select their own curriculum with the approval of a review board, plan the use of their time (four-five years) and use the innovative Wilson Campus School for research, evaluation and development of classroom skills. Upon completion of the program, the review board will recommend certification by the state department of education. The Wilson studios (which include the campus school) encompass levels from pre-kindergarten (age 3) thru a masters program. The goal: to break down barriers between age groups and establish an interaction pattern which benefits all engaged in learning experiences, according to Robert Vanderwilt, director of the Wilson Campus School.

For more information, write to Robert Vanderwilt, Director of the Wilson Campus School, PO Box 80, Mankato State College, Mankato, Minn. 56001.

Retraining Experienced Teachers

Retraining of experienced teachers is usually done either in summer institutes or on-the-job through weekly seminars. Many informal education teachers have been self-taught; they visited other schools, read the professional literature, and made many plans before trying informal education in their classrooms. One such teacher has called a trip to a successful informal classroom essential. "Otherwise, all you're doing is setting up airy classrooms," she commented.

Preparation is needed to acquaint teachers with the problems they will face when challenged by a new informal classroom. To illustrate, the noise level is far greater than they have ever experienced, except perhaps during recess. Often it takes students time to become comfortable in the free environment of the informal classroom; they are as accustomed to structure as the teachers. The teacher must accept the fact that not all children will work in all interest centers or all areas of study every day. Evaluation is difficult at first because the usual tests and assignments are generally modified or not used.

The new informal education teacher may be overwhelmed by the need to prepare a sufficiently broad range of opportunities for the whole class. Also, it is difficult at first to get the children to take responsibility for the care of materials; they are used to having teachers do that. Sometimes, the room can become too free and the teacher can lose control completely. Only proper preparation can qualify the teacher to meet these contingencies, and only experience can show her the best ways of coping with them. In Teaching in the Informal Classroom, experienced informal education teachers offer this advice: "Go slowly, take it easy, get all the help you can and keep the kids

with you.... My only advice is to start working with one kind of activity, whatever the teacher feels most comfortable with.... There's no kit, no manual, that will tell you what to do next. You just have to fall flat on your face. Then you get up and start again."

How Teachers React to Informal Education

Informal education owes its popularity, in part, to the enthusiasm of teachers who have tried it. It not only works; it also makes teachers happier at their work, proponents of informal education say. "An elementary teacher really has a lousy occupation. You are intellectually and socially isolated from other adults," according to Prof. Elizabeth Cohen of Stanford U. In informal education, she says, "teachers can make decisions about what they will do. So their sense of power increases and their job status goes way up." Prof. Cohen and John Meyer of Stanford's sociology department surveyed informal education teachers and found that they "were more satisfied with their jobs, felt more autonomous and reported having more influence in making all kinds of decisions."

The two Stanford researchers sampled 110 teachers from nine informal education schools and 120 teachers from eight traditional schools, all K-6 in middle class suburbs. "In the traditional schools, ambitious teachers tended to be more dissatisfied with teaching than did relatively unambitious teachers.... In the open schools, women teachers interested in vertical promotion were also less satisfied than women without such interests. There was, however, a sharp rise in the occurrence of women with professional ambition in the open school setting, and these women tended to be more satisfied with their jobs," the study noted.

Comments from two informal education teachers follow:

"I enjoy the idea of learning being in the hands of the learner--student teaching student--and enthusiastic group interaction. Discipline problems disappear when sharing and group feelings appear."

It is "much more demanding of my time and effort. I go home just shot. But there's a much more rewarding, very personal relationship between teacher and students than I ever had before."

There are negative comments too:

One teacher explained how difficult it is to adjust to the informal classroom. "Changing your ideas about children and how they learn...learning to trust them, to let go, to stop feeling that you must watch, control and evaluate their every move...sensing the moment of willingness and ability to learn and teaching at that moment...maintaining and enlarging the interest centers...becoming more open as a person...learning to live with and like the movement, the noise, the absence of the syllabus."

A teacher in Dallas rejected informal education entirely: "I'm not their babysitter. I'm not going to try to teach them the things they don't learn at home. I'm here to teach them their sixth-grade subjects."

Open to All

Personalizing education--stressing the importance and uniqueness of each individual--is essential to the age in which we live, says Thomas F. Toomey, a campus laboratory school director. Toomey's Campus School, part of the State U. of New York's College at Cortland, is trying to meet the needs of the individual student in an open atmosphere and with an alternative approach to the typical forms of instruction, curriculum and evaluation. Teachers, parents, professional educators and students all get involved in the school's program, appropriately called "Quest for an Alternative."

Children taking part in Quest are no longer grouped in traditional stair-step grades. Instead, they are placed in one of three groups: early childhood, ages 3-6; primary, ages 6-8; and intermediate, ages 9-11. In the primary and intermediate units, students must devote one and one-half hours' instruction daily to three subjects: language arts, reading and math. The remaining four and one-half hours belong to the child. He decides which "interest area" he will work in. He can choose from such areas as art, creative language arts, health, home economics, industrial arts, music, personal guidance, photography and science. In addition, other interest areas are sponsored by parents. The children schedule their own time on a weekly basis, under the guidance of their family room teacher. Additional guidance for the elementary-age youngsters concentrates on their social and emotional growth.

Both students and student teachers get involved in designing and adapting the curriculum, making it fit their needs rather than forcing them to fit into rigid confines. Evaluation by teachers, pupils, parents and college participants is considered essential in the development of the "opened" program. In place of evaluation based on cognitive learning and the standards of the teacher, the Campus School concentrates on assessment of such things as the interests, attitudes, values and personality adjustment of the individual. Parents and student help determine what is to be expected of the student and what he must do if he does not live up to those expectations.

Another way the Campus School fosters openness is by encouraging participation in many activities: about 75 teacher trainees per year work with the Campus School faculty; another 100 students participate in Quest's outdoor education program; a Parent Volunteer Program and a Senior Citizen Volunteer Program allow community members to lend their skills and time to help meet the youngsters' needs.

Information on Quest goes beyond the people involved and the rest of the community; it is disseminated by the Center for Research and Demonstration. The Center also works with the Campus School by specifying and investigating problems related to openness; developing and evaluating innovative ideas; making available to researchers background materials and use of the Campus School; and providing technical assistance to schools interested in developing educational alternatives.

THE CHILD IN THE INFORMAL CLASSROOM

Ann's story (see box, p.39) is not the story of a typical day in a typical informal classroom, because there is no typical child and no typical informal classroom. For one thing, informal education is too new to have resulted in standardization. For another, by its very nature and philosophy, informal education is not susceptible to standardization. It is a response to each child in his own way, by each teacher in his own way. Ann's story is but one example of one child in an informal classroom in Britain. Here are glimpses of other children in informal classrooms:

"Like a pint-sized Flip Wilson, a sixth-grade boy grabs a microphone stashed in front of the blackboard and swings into a foot-stomping, devil-cursing sermonette. 'Repent, repent,' he chirps, lashing out with his tiny arm at a semicircle of transfixed classmates on the floor. Barely six feet away from this hubbub, a covey of totally enthralled children sorts through medicines and bandages to doctor a classmate who lies prone on an aging hospital bed. Three steps from them several other youngsters practice speeches on brotherhood, while off to the left still another group gathers around a beat-up cash register and argues animatedly about grocery prices." Thus Newsweek described the Grape Street Elementary School in Watts on May 3, 1971. The AASA Commission on Open Space Schools presents another aspect of informal education with the following report on "Johnny's and Suzy's Day."

Johnny's and Suzy's Day

"A day in an open space elementary school may begin with Johnny and Suzy joining their group with their assigned teacher in one area. As the program gets under way, Johnny leaves this area and moves to another area. He will spend about 20 minutes in the learning center with six or seven other children from their group. He is interested in sea life, and this morning he is viewing a special film on sea anemones that the library aide helped him locate. Others in the group are working on reading skills in various ways such as playing skill games, telling stories and using teaching machines. The learning center provides for many other activities and includes a variety of resources for math, history, literature, science and art. A parent volunteer aide or perhaps a junior or senior high school student is presenting a special reading program to another group.... Aides are watching each child's progress, and before they return to their reading teacher an aide will note activities and accomplishments for the day.

"This group then moves to their reading teacher. They are studying phonics and will work at a listening post for a review of blends. The chil-

A Day with Ann

Ann is a five-year-old Briton in her second term at an infant school in a suburban area. She is in a class of 5-, 6- and 7-year-olds and is engaged in activities that are helping her learn to read.

On her arrival at school in the morning, Ann's first concern is with some seeds she planted the day before. She finds her name on a flower pot and looks carefully into the dirt for the first signs of growth. Satisfied that nothing has happened, she asks the teacher if she may do a painting. The teacher nods. Ann puts on her smock and goes to a large easel and paints. When the painting is done, her teacher comes over to talk about it.

An older child looks on and points out the painting to a friend. The teacher gets a pencil. Ann asks her to write on the picture, "My sun pattern. By Ann," and watches carefully as the teacher writes the bold letters beneath the painting. "Let it dry a bit," says her teacher, "and then come to me. We'll see if you're ready to trace over the words with a crayon."

Ann joins a friend at the water table--a large, movable basin on legs. Using a funnel, they pour water from large containers into smaller ones. Their teacher looks on and talks with them about which container holds more. Ann spends the rest of the morning with her hands and arms deep in the water.

In other parts of the room math cards are put back in boxes. Paintings are hung over racks to dry. The children come to sit around their teacher once again; a girl whispers a request to her. "Mary wants to read her story to the class," says the teacher. Ann and her classmates listen attentively while Mary reads a tale of adventure. A group of boys display a dragon, a prince and a princess made of tissue paper, tinfoil and bits of cloth to illustrate a poem the class likes. The teacher and the class speak the words of the poem and sway back and forth to its rhythm.

By the time Ann returns from lunch, some of the children are already at work. Ann asks her teacher what she can do. "Would you like to join Sarah in the Wendy House?" Ann enters the little door and dresses herself in a long skirt, high heels and a cloak.

After a few minutes, Ann returns to her classroom, where everyone is changing for physical education.... When the movement class ends, Ann and Sheila, a seven-year-old from her class, collect eggs from the chicken coop owned by the school. Sheila asks Ann to count them and then checks her answers. Ann watches as Sheila records the number on a chart, which is kept in the corridor so that all can see it. The two girls rejoin their class for a story read by the teacher....

Excerpted with permission from Children Come First by Casey and Liza Murrow

dren put on earphones and each child has a turn at operating a cassette. When the tape is finished and worksheets collected, the group meets with the reading teacher. He evaluates their progress in blends and continues from there with the course of instruction. After the lesson, the teacher makes suggestions to each child on his continuing program. Reading levels are re-evaluated often, and the child may be reassigned to different teachers, depending on his progress.

"Suzy is working on her writing. She is intrigued with moving into cursive writing, though some of her classmates are still using the manuscript style. Her creative interests lie in the play and drama, and since most children enjoy role playing and an opportunity to try their hand at being someone else, she wants to write a skit about Sojourner Truth for some of her friends to act in.

"Other children are working on a special post office project as part of learning mathematical skills. A local postal clerk has familiarized them with his responsibilities at work and they have set up a little mock post office in their cluster where they buy and sell play stamps of different denominations, weigh packages and compute rates by zone charges. The mathematics program at this particular school is divided into skill levels. The children are placed at various levels only after careful evaluation by the teacher. The math program is based on behavioral objectives written by each team of teachers. The children know exactly what performance is expected, and what they have to accomplish to proceed to the next level. Games, simulated real-life experiences, and trips to nearby business establishments are all a part of the program...."

These two American examples are so different from the British example, and so different from each other, that they could be taken to exemplify three different systems of education. Yet all three are aspects of informal education, and informal education encompasses a multitude of other experiences also. Many advocates of informal education stress that the emphasis must always be placed on the student, not on structure of any type. Some of these advocates say that in "true" open education, a student may never have to go to a regular school classroom or to be part of a group of students. To repeat, informal education is too new to be uniform and perhaps never will be.

Children Pursue Their Own Interests

One difference apparent in the three examples cited above is the child's freedom to pursue his own interests. Informal education, based on trust in children, depends on motivating a child to learn by using his own natural interests and curiosities. In an informal classroom, children are encouraged--to one degree or another--to pursue those topics that interest them. In one classroom, for instance, an older boy was allowed to spend three weeks building a model of a suspension bridge he had seen on a car trip with his parents. His teacher decided that the research that went into making the model--the study of suspension bridges from the encyclopedia and advanced mechanical engineering textbooks, the mathematical computations required to transfer his study of theory to reality, the choice of materials and the actual construction of his bridge, as well as the writing of a

required report on his project--gave him a chance to use his growing skills more intensively than an assigned project.

The boy who built the bridge, or any other student in an informal classroom, has the freedom to pursue his interests because his teacher trusts that he will learn by himself if left to himself. Conversely, a student entrusted with educating himself will be less likely to cheat, or to try to deceive, informal school proponents claim, since he is the only guardian of his education. As one student put it: "At the school I came from you just sat at a desk copying from a book and all that junk. It was a big game to see if you could chew bubble gum all day and sometimes stick it on your nose without the teacher noticing. Here you learn responsibility."

The child in the informal classroom is not left entirely to his own devices, however. The teacher acts as director, suggestor and arbiter as well as an information source.

Children Move Outside the Schools

The community is used as a learning resource in many informal classrooms. The mathematics practice in Johnny's classroom came when the students set up their own post office. The summer project in another informal school was to start an autobiography. Children were asked to interview their parents and older relatives to get background information. When school began in the fall, many of the autobiographies had been completed. This project led to a study of the community, each child being asked to write about some local place. Although the reports began with places that interested adults, such as stores and factories, they soon included some of the students' favorite spots, like quarries and streams. Some children decided to make a map of the community and thus learned how to measure and scale their measurements. Others decided to make blueprints or models of their homes. Some expanded this project into a history of the community, urged on by the teachers and aided by some of the older people in the community. Some children studied the ecology of the area, while others delved into its industrialization.

None of this work was arbitrarily divided into subjects. Mathematics merged with science, science ran into reading and writing, everything combined with history. There was no emphasis on the work of education: teaching and learning. It was all a spontaneous outgrowth of the children's interest in themselves and their surroundings. Moreover, much of the independent work in an informal classroom, aimless as it may seem at times, could be considered more useful to the child than a conventional curriculum, informal school specialists assert. What children in informal classrooms are learning is how to get information--what resources are available and how to use them.

What Happens to Homework?

Homework assignments are rare in most informal schools, mainly because there are so few "facts" for the student to memorize. If a student becomes caught up in a project, he is permitted to take home books, but no reports of his reading are required, nor is he asked to prove in any other way that

he has pursued his interest at home. This is consistent with the basic trust in students and their responsibility for their own learning. It assumes that a child will learn what he wants to learn and will endeavor to cheat when he believes he is deceiving someone else--not himself.

Although homework may not be assigned, students will often bring to class something they have written the night before--a report or a poem. They have been inspired to do the "extra" work by what they are learning. Also, they know that their work will get recognition in class the next day by being put up on the wall, read aloud to the class, or read quietly to the teacher or to another adult who will comment on it.

Even though there are few assignments in most informal classrooms, there are those, like Johnny's and Suzy's, where students are required to complete a certain amount of work within a certain time. Few assignments are made in vertically grouped classes, where students of several ages or several grade levels work and study together. This is more common in the lower grades but it sometimes occurs even in high school. A typical grouping would be of 5-, 6- and 7-year-olds, as in Ann's class. Here the children teach one another. This method is particularly valuable for the socialization of the younger students. Seeing older children read and write stimulates younger children to do the same. Younger children also learn how to use materials and equipment by first watching older students use them.

In one classroom, for example, a 7-year-old boy was learning equations by using the balance scale. He carefully counted out 11 rocks and then added bottle caps to the other side of the scale until it was balanced. Then, checking his count a second time, he wrote "11 rocks equals 37 bottle caps" and drew a picture of his experiment. He was watched closely throughout the whole process by a 5-year-old girl who, when he finished, got her own scale and began to balance various objects. She was learning about equations just by watching and trying. Another advantage of vertical grouping is that the same teacher works with students for a longer period--three years in this case. This can cause problems if there are personality conflicts, yet there are advantages for students in this type of continuity.

There are also horizontal groupings in some informal classrooms. This is the type of grouping in most traditional schools: by age or skill level. Usually an age-grouped class is also divided into skill groups, with children placed in different groups in each subject.

"A 9-year-old with a head for figures like Bernard Baruch's may be a deadhead when it comes to tangling with a dangling participle," stated a report of the Educational Facilities Laboratory (EFL). "He may play three instruments by ear and be deaf to the subtler distinctions between French vowels. However uneven his attainments, there is usually a group of students working on his level on each subject, and a teacher to go with it.

"If he is a slow learner, he may stay with the same group for months. If he learns rapidly, he can move...to a group at a more advanced level of achievement. When he moves, the move is an easy one: around a cabinet or across to another cluster of pupils a few yards away. There is no need for adjusting to a new teacher, new classmates, a different room," EFL stated.

Principles of Grouping

Groupings, whether vertical or horizontal, are based on the following precepts, according to Hertzberg and Stone:

- Children have individual rates of learning. As children differ, not only one from another, but also in ability from subject to subject, the informal classroom takes into account individual learning rates in various subjects. One boy may learn by plugging away at a subject slowly and methodically until he has mastered it. Another boy may give a subject a cursory look and go on to something else until he is ready or able to go back and assimilate the material. Adults work this way, taking on several projects at one time and eventually finishing them all without seeing each one all the way through before starting another. Why shouldn't children?

- Children learn in different ways. Some children are visual learners who are able to master a skill after seeing it demonstrated. Others must get their hands into it, understanding it concretely before they can grasp it abstractly. This is why the balance scales teach some children equations more easily than written explanations of the numbers on both sides of the mathematical statement.

- Children learn from both individual and group experiences. In most informal classrooms, children have time and space for individual study as well as group activity. The process of learning to work with others is considered as important as learning to work alone, and both are considered important in learning specific subjects. In some, learning how to learn is considered paramount. For this reason, children are encouraged to work in groups. Rather than fear that they will copy from one another, the theory is that they will learn new approaches from the viewpoints or study methods of others. They are also encouraged to criticize as well as to help each other, learning by identifying and correcting mistakes of others.

- Children learn best when they are actively involved. When children figure things out for themselves, instead of being told, they learn them better--just as adults do. It is easier for anyone to learn bricklaying, for example, by trying it than by reading about masonry. Another illustration of this principle in the informal classroom is the division of ingredients in recipes to learn fractions.

These principles of informal education are epitomized in an ancient Chinese proverb recalled by Silberman: "I hear, I forget; I see, I remember; I do, I learn."

Lillian Weber's Open Corridor

Lillian Weber, education professor at the City College of New York, studied British informal classrooms and concluded she could not change traditional teaching methods in New York by lecturing and showing movies to teachers. Appalled at the subsequent loss of gains achieved by children in Head Start--where preschoolers had what amounted to informal education, with additional materials and individual attention--she wanted to use Head Start methods in a conventional elementary school.

"The usual classroom has prescribed standards of accomplishment, a preplanned curriculum, almost total emphasis on verbal learning, little interrelating of one area of learning with another, very little small-group instruction and a widespread use of homogenous groupings. The teacher's presentation rarely recognizes different levels of development, accomplishment, motivation, pace or mode of learning. Failure for some is built into such a setting," she said.

She concluded that a change in the physical environment must precede change in the teaching methods. Persuading the administration to build new structures or to gut and remodel old ones along the lines of the open space plans so widely admired in Britain seemed completely out of the question, however.

In the spring of 1967, when the Office of Economic Opportunity (OEO) started Follow-Through--the program designed to continue Head Start methods for children who needed them--Mrs. Weber applied for a grant. Her proposal to OEO said: "A corridor can be effectively considered a unit apart from the school and so a 'small school' within a big school. Classrooms, from preschool through the second grade, opening from such a corridor are my unit. By opening the doors, enriching equipment in classroom and corridor, encouraging movement through the corridor between classrooms and movement into the corridor, a continuity program, one grade from another, starting from preschool, could be established, meshing with the actual progress of the child."

OEO turned her down. In the spring of 1968, without funds, she helped initiate a prekindergarten, two kindergartens, a first- and a second-grade classroom and the adjoining corridor in Harlem's P.S. 123 as a "nonintrusive model." (Later, grants from two private sources permitted purchase of materials for the corridor.)

On three mornings and two afternoons each week, the doors to the five classrooms are left open for one and one-half hours and the children move from one room to another, taking advantage of the corridor for activity, too. Inside the classrooms, teachers conduct lessons. Outside, materials of many kinds are available for independent learning. The corridor has given teachers a chance to witness the potential of unstructured, multilevel teaching. Although the corridor plan has yet to gain wide acceptance, it is being tried in several other New York schools. Mrs. Weber believes she has found a way to teach teachers as well as students without changing architecture.

MANAGING INFORMAL SCHOOLS

If you want to change a system from traditional to informal education, according to Don Glines, there are seven prerequisites:

- Dissatisfaction. Administrators and the community must both realize that the traditional system is not doing what it is supposed to do, or is not doing it as well as it could be done.

- Commitment. Administrators and the community must make a firm decision to effect necessary changes and to improve the schools. They must realize, however, that they face a hard struggle, and possibly many mistakes.

- Work. Desire and commitment to change are of little value without work. Changing to informal education does not come about by wishing.

- Creativity. Because informal education is still so amorphous, and because it must be modified to fit each particular situation, creativity is needed to adopt it.

- Leadership. No project of such magnitude can succeed without strong and resolute leadership. There are too many other pitfalls in redoing an education system to allow it to falter for lack of leadership.

- Paraprofessionals and Volunteers. Changing from a traditional to an informal education system means accepting and adapting to the use of paraprofessionals and volunteers to help teachers make informal education a truly individualized form of instruction.

- Clerical/custodial. These roles, too, become more important in informal education, as some jobs are shifted from teachers to others.

Getting Started

"Organizing and staffing for change unfortunately lead right back to that cliche-sounding answer: a staff really must develop its own patterns," Glines says. "There is no 'one way'; there is no 'best way.'" In spite of the lack of a blueprint, Glines suggests that a district approach informal education rapidly, while providing alternative learning approaches. He proposes that the district divide its schools into three groups, where three approaches can be tried--traditional, team teaching and complete informal education. This way, he says, the community can draw its conclusions and both parents and students can choose the school they feel fits their preferences.

Others also advise restraint in changing from traditional to informal education. As in any experimental program, there should be ample leeway for changes after the start. The budget should permit knocking out a classroom wall in the middle of the year or hiring an aide long after staff requirements have been set. There should also be ample advance planning, but Glines suggests that planning time be limited to a year or less.

Informal Education Facilities Design

After deciding to go to informal education, the next decision is whether to build or remodel a structure specifically designed for the new approach. Informal education can take place in a conventional classroom, as we have seen, yet as one teacher put it, "having a schoolroom designed to have as much open space as possible facilitates the success of such a program psychologically." If the decision is to build or remodel, the architect should be brought into the planning process as early as possible. It's a good idea, too, to have the principal who will head the staff also chair the planning group so that he can have a hand in staff selection and training, program coordination and other essential choices.

Some informal school planners suggest that the new informal school have three categories of space: committed, uncommitted and middle areas. Committed space includes boiler rooms, mechanical equipment rooms, custodial spaces, toilets, stairways, kitchens, gymnasiums, locker rooms, music rooms, kindergarten rooms, health suites, administrative offices and possibly lecture auditoriums. These spaces obviously cannot be used for other purposes. Kindergarten and music rooms are best kept separate from the more adaptable rooms to make them more usable, free of noise or confusion.

Uncommitted spaces include general learning areas, or informal classrooms; instructional materials centers, learning centers or media spaces; dining halls; and circulation spaces. The middle spaces are those that are possibly adaptable to other uses if the school is set up to do so. These include areas that in other schools would be committed, such as administrative offices, or spaces that in other schools would be uncommitted, such as dining halls. They would also include special purpose teaching areas, such as foreign language or social studies or counseling areas.

"In the most common plan, three or four open space instructional areas (each for 100 or more students) are clustered about a central resource center, and non-open space facilities, such as gyms, multipurpose rooms, or music suites, are grouped together in a separate area. The entire school, however, is usually under one roof, with a rather compact plan," advises AASA's Open Space Schools.

There are as many variations of this plan, however, as there are adherents to informal education. When the Pleasant Street Elementary School in Sidney, N.Y., was declared unsafe, an addition was built to an existing elementary school facility. The L-shaped building shares a double gym, locker rooms, music room and cafeteria with the other school. The addition has a large open area with 4' 8" dividers, a resource center with carrels, a cozy corner with child-sized plush furniture, and administrative space.

In contrast, the William Monroe Trotter School in Boston's black ghetto is a two-story building. The ground floor houses the kindergarten and pre-kindergarten, auditorium, indoor playroom or gymnasium, library and administrative suite. The second floor has 24 classrooms for grades 1-5, in four clusters. Each pair of classrooms is divided by a folding wall. Each cluster's six classrooms surround a learning laboratory and study carrels. The learning center has the latest electronic equipment: slide projectors and filmstrips, motion picture projectors and films, headsets for individual work.

Movable partitions give administrators and teachers more options. Open spaces can be divided into conventional classrooms or they can be used in other ways. Once movable partitions ran on ceiling tracks, which limited their adaptability. Now partitions can be free-standing; although their initial cost is higher, their uses are more varied. The use of partitions is growing as advances in construction allow larger open spaces than before. Columns are no longer needed to hold up ceilings with spans wider than 25 or 30 feet. "Outside window" rooms are no longer considered necessary. In the large interior spaces, with unsupported spans of 60 feet or more, there is no feeling of being confined in a windowless room. Air conditioning and improved lighting also eliminate the need for windows. For these reasons, exit laws have been changed in many states to permit windowless rooms. This is not to say that informal schools are, or should be, built without windows; it is to suggest the wider range of possibilities when designing a school today.

Equipping the Informal School

"In open space schools, furniture and equipment do much of the work walls and partitions do in buildings with self-contained classrooms. Essentially, a major function of furniture and equipment is to divide the open spaces. And if furniture replaces walls, it must also replace chalkboards, tackboards, projection screens, storage shelves, and all the other things that used to be mounted on the walls," the AASA report explains.

"Furniture in open space schools sometimes replaces whole rooms," the report continues. "Storage rooms and closets for the most part are gone--replaced by cabinets. Long, skinny corridors with lockers like those in traditional schools are not necessary in open spaces. Coats, hats and overshoes are frequently stored in special cabinets in open space schools." One teacher warns that provision for hanging coats and wraps must be sufficient because children often drop their wraps on the floor where they are certain to be trampled when the class rushes outside for recess.

Storage for personal items is a vital part of any informal classroom. Since the students do not have individual desks, they need a place to store their pencils, keys, combs and other belongings. Many informal classrooms contain wire or plastic trays, one for each child, which can be stowed in storage walls or carried about by the children.

In the informal classroom, desks are used at some times and for some purposes and ignored at other times. In the lower grades, the piece of "furniture" that gets the most use is the carpeting on which children sprawl at will to do their work. Tables and chairs are lightweight, stackable and used

in many arrangements. Ideally, the architect should be asked to help select the furniture, with an eye to design as well as function.

Financing the Informal School

Many experts believe the physical plant of the informal school need cost no more than a traditional school. Boston's William Monroe Trotter School, for instance, cost less than $27 a square foot. Even using the newest and best materials, the informal school can cut costs because fewer square feet of space are needed per pupil due to the lack of corridors. Experts advise against building an informal school simply to save money, however. That attitude might lead to reducing committed spaces, such as music rooms, whose activities tend to overwhelm others. On the other hand, Mankato's Wilson Campus School, once a traditional school, used the same eggcrate facilities (enclosed classrooms), and the same staff and received no additional money, to show that almost any school can change significantly if it really wants to.

It is possible to get public and private funds to help in building, staffing and running informal schools. The Ford Foundation has given considerable amounts to experimental informal schools in New York City, Philadelphia, Boston and elsewhere.

Funds may also be available under Titles II and III of the Elementary and Secondary Education Act. A school in New Hampshire got Title III funds for a "weekly interpersonal skills and group dynamics training program for teachers who needed to understand children from the disadvantaged segment." A New York school got $20,000 under Title II for 5,200 books, 354 filmstrips, several multimedia kits, 50 cassettes, 22 film loops, 27 transparency sets, 48 short strips, three Language Master sets and 96 records for its resource center.

Modifying a Traditional System

The California Teachers Assn. (CTA) set up an experimental consortium of 12 school districts, each of which "donated" one elementary school for the study and development of informal education.

As explained in CTA's November 1970 proposal, under the consortium agreement each participating district was required to--

- Designate one participating school as a member of the consortium. The minimum length of participation would be three years.
- Free the participating schools from the customs, rules and regulations (real or felt to be real) that impede experimentation and innovation.
- Strengthen each school as an agent of change and give it a chance for risk-taking, sanctioned freedom to fail, and delayed proof of results.
- Help each school become a base for generating and testing new ideas and practices for dissemination to other schools in the various districts.

- Secure board approval for the school's participation in an innovative program and its right to deviate from standard practices and policies when the school staff considers it necessary to do so.

- Secure public understanding and acceptance of the experimental nature of the program to the extent of designating it an "experimental school," if necessary, and giving parents a choice as to whether they wanted their children to attend.

- Permit the school principal and teachers to participate fully in all activities of the consortium, even when they conflicted with district-sponsored activities.

- Provide released time for principals and teachers to participate in consortium activities that occurred on school time.

- Provide funds to principals and teachers for travel to meetings and conferences that occur within the general geographic area served by the consortium.

- Provide a minimum of 20 substitute teacher days per year to the participating school for the purpose of visiting other schools.

- Provide a small discretionary fund for each school so that small purchases of materials so often essential to a particular study, project or experiment can be made in response to needs as they arise. School personnel should not need to pay for the extras out of their own pockets.

In return for district participation, the CTA set up an International Center for Educational Development which worked on the training and supervision of the informal education staff, served as a clearinghouse for information gathered by the 12 schools, ran workshops for other teachers and administrators in the participating districts, taught designated teachers and principals how to teach informal education methods to others, arranged for field trips to other informal schools, and provided expert consultants for each district, as necessary.

The Role of the Administrator

In an informal school, the principal cannot supervise his teachers by reviewing their lesson plans and test results, as both are considered outmoded by informal school authorities. Instead, the principal spends a great deal of time in the classroom participating in the action. This is not as distracting as it would be in the traditional classroom because teachers and students are less aware of the presence of an observer amid all the usual activity. The principal cannot remain chair-bound because the observations and opinions of each teacher aide or paraprofessional, as well as those of the teacher, must be weighed in determining what should happen to and for each student.

The principal of one informal school explained his problems this way in an interview for American Education:

"Interpersonal relationships were our biggest hang-up--teacher to student as well as teacher to teacher. When our school opened, it incorporated the combined student bodies of three old schools that had been closed. The 640 kids who came together included disadvantaged children from an urban renewal area, middle-class children, and a smattering of kids from more affluent homes. After they determined their new leaders and established a 'pecking order' in their own power structure, the students adjusted well to one another. But some of the teachers had problems of adjustment. For instance, a teacher who had always related well to middle-class children found if difficult to cope with the attitudes of pupils who came from disadvantaged homes. We had to develop in these teachers a sensitivity to these children's needs."

To solve teacher-to-teacher problems, one principal asked each teacher privately which teachers he or she would prefer to work with and whether he or she would consider becoming a team leader. He found that this method helped him build compatible teams. In another school district, when the new informal school opened, only teachers who requested jobs in informal classrooms were assigned there. Thus, teachers who did not welcome the concept of informal education did not have to adjust to a strange new teaching method.

In a third school district, a principal had to introduce 20 staff members--ranging in age from their mid-20's to over 60--to informal education. He started by meeting with them in small groups to acquaint them with the philosophy of informal education. He sent four teachers to a summer workshop and made them team leaders when they returned, responsible for educating other teachers. These four met with their teams in the evenings, usually in the home of one of the teachers, to discuss and plan the informal school.

Later, 15 teachers went to visit an informal school in a neighboring district. "This was the turning point as far as staff reaction was concerned, and doubts about open space teaching started to vanish after this interesting excursion," the principal reported. Finally, the teachers met as a group and ran their own workshop. "The workshop program included discussions on reporting to parents, the use of student teachers and teacher aides, and how to accommodate visitors, as well as long work sessions on construction of checklists for reading levels and checklists for the use of audiovisual materials in the instructional resource center." After all this preparation, the 20 teachers were ready for informal education.

If the district is willing or able to hire outside the district, it can find teachers who are committed to informal education. The New Schools Exchange Newsletter (701 B Anacapa, Santa Barbara, Calif. 93101) matches teachers and schools; currently, there are more teachers in its listings than jobs.

Administrators of an informal school must keep in mind the teachers' great need for planning time, especially if informal education is a new experience. In one school district, the children are released at noon on Thursdays to give teachers an afternoon for planning and inservice training.

Administrators should not underestimate the contribution to informal education of high-calibre, well trained paraprofessionals. In one school, the administrator sacrificed one professional staff salary to hire three instructional aides. Another school has arranged a sequence in which nonpro-

fessionals can start as teacher aides and, through training programs, advance to teacher assistant, teacher associate and, finally, certified teacher. This opportunity for advancement has had a magnetic effect on interested, capable paraprofessionals.

Involving the Community

The paramount responsibility of the administrator, shared with others, is to win the understanding and support of the community for his commitment to informal education. And, as one informed school administrator pointed out, the community usually divides three ways when a proposal for informal schools is put before it--those strongly in support of informal education, those strongly opposed, and the middle-of-the-roaders who have little, if any, opinion. Usually, the administrator says, the middle-of-the-roaders constitute the largest group and if they can be swayed to join one of the other two groups, that group will win.

The way to achieve the backing of parents and others in the community for the new system, experts agree, is to involve them as much as possible in the planning and implementation stages. Don Glines suggests that the community should be adequately informed about all aspects of informal education and should have an actual model of a working program to study. Without this involvement, the strangeness of the informal school can antagonize both parents and the rest of the community. That which is familiar may be resented but it is not threatening. "If students and parents really understand the philosophy, there is usually some opposition, but not a revolt. It is when they do not understand well enough to at least accept the possible risk that the school is in trouble," Glines says.

It is wise to hold parental briefings as often as possible--perhaps every day for the first month--to keep parents informed of what is happening and what changes or modifications are being made, informal school authorities advise. For a while, students will be too confused by the change to react positively, but once they get the hang of the informal school, they will often become its strongest advocates. In one informal school, all visitors were kept out for the first half year, while teachers and students adjusted to the new concept. This is not practical in most communities, however, because many adults will be eager to see what they and the school system have developed. Parents should be encouraged to contribute to the success of the informal school by volunteering to work in the library, the office, the classroom or the clinic, observers point out. Parents who cannot devote regular hours should be encouraged to volunteer as aides for special events, such as field trips or the annual eye testing program, they say. This involvement will give parents a stake in the success of the school as well as acquaint them with its workings from the inside.

INFORMAL EDUCATION IN SECONDARY SCHOOLS

The principles of informal education--individualized programs, respect for the student's judgment and faith in his ability to learn--are as applicable in secondary education as in the earlier grades, according to its advocates. In a growing number of high schools, accordingly, efforts are being made to "humanize" secondary education. Dubious of these experiments, some ask whether adolescents will study if they are given large blocks of unscheduled time during the school day. This question was the subject of a research project involving 1,600 students in a senior high school (grades 10-12). The conclusion of the study: "When students were allowed time and place to 'get away' from the constant pressure of attending class and studying or working toward a class assignment, they generally proved to act responsibly and did not tend to take unfair advantage of the opportunity given them."

The high school students had free time during the day to take advantage of a counseling center; the library; centers for the study of foreign languages, language arts, math and social studies; speech and band rooms; auto mechanics shop; driver training; the gymnasium; and a cafeteria that served breakfast and snacks until 10:45 a.m., reported Larry L. Smiley of the U. of Iowa, the researcher who conducted the study.

Smiley found that upper-class students tended to use the library more than under-class students, that boys tended to use it more than girls, that students who wasted time used the cafeteria as much as students who went there to study, and that boys spent more time at each activity than girls. "If students are to make satisfactory choices of their time when they are not in school," Smiley commented, "they should have the opportunity to make similar choices while still in school. Students need a chance to make mistakes, and the school offers the best place for them to be made because trained personnel in the school can assist the student in correcting his errors."

Among the many experiments where students are given a chance to make their own choices are:

The Parkway Program in Philadelphia, which has no building, no curriculum and few conventional teachers; Haaren High School in New York City, where 2,500 students attend 14 semi-autonomous mini-schools in the same building, each with its own specialty; Berkeley High School in California, where students have choices ranging from traditional programs to an off-campus "Black House" for black studies; Dover High School in New Hampshire, where students have to be in classrooms only during scheduled class hours; the National Urban League's high school program for dropouts in New York City, comprising a Street Academy, an Academy of Transition and a Prep School. Some others worthy of note are:

John Dewey High School, Coney Island

John Dewey High School, Coney Island, is one of New York City's major experiments in public secondary education. For greater flexibility, the school day is divided into 22 periods instead of the customary seven, and the school year has six terms instead of two. The teachers, all of whom volunteered to teach at John Dewey, receive extra pay because they work from 8 a.m. to 4 p.m., an hour longer than usual. About one-fourth of the student's time is set aside for independent study. Completion of study kits during the independent study periods yields a course credit. The program permits graduation in from two to six years, depending upon individual rates of progress. Students are not given grade scores but must pass the New York State Board of Regents examinations in each required subject. The attendance rate in 1971 at Dewey was 81% --8% higher than the average attendance rate for other New York City senior high schools.

A New School in a New City

Columbia, Md., a "new town" located between Baltimore and Washington, D.C., will eventually have 60,000 residents. Its high school, Wilde Lake, is as innovative as the city's plan and architecture. With only 950 students (grades 10-12), Wilde Lake is the first high school in Columbia; another is expected to open in 1973. Wilde Lake's architecture is similar to the open school model used by many informal education elementary schools. There are few permanent internal walls, although partitions can be erected overnight if closed space is necessary.

Under Wilde Lake's open enrollment plan, any student who will provide his own transportation is accepted. At Wilde Lake there are no formal classes per se and little permanent-group instruction. Students start the day by meeting with their advisors, whom they select. Every adult staff member in the school, including Principal John Jenkins, serves as a student advisor. The 25-minute meetings range from sensitivity groups to get-acquainted sessions. The meetings aim at helping the individual student figure out what he's going to do the rest of the day and how to take advantage of all the school has to offer. "The crucial part of our program is that the teacher has the power to alter the student's daily schedule," Jenkins said. A more structured program is designed for students who are unable to cope with the freedom of Wilde Lake, "but we try to wean them away from the structure," Jenkins added. A low student/adult ratio of 16 to 1 probably helps with this aim. (Wilde Lake has 40 teachers and 20 paraprofessionals.)

Wilde Lake students use a variety of materials, from learning packages to books, in over 100 courses. "We offer more courses for 900 kids than any other high school in the world," Jenkins said. And students are free to choose courses that interest them rather than having to take only "required" courses. The State of Maryland does not require comprehensive pre-graduation examinations and only specifies that students take a certain number of courses in each area. "We define this our own way," Jenkins explained. "A kid could take drama or filmmaking for four years to fulfill the English requirement." In music, students may study anything from piano instruction to Moog synthesizer to rock combo. In a course called Ports of Call, students spend an hour

a week for nine weeks learning about a particular country through five disciplines--social studies, language, music, cooking and art. Currently, students are concentrating on four countries: France, Germany, Spain and Russia.

Students receive credit for work outside the school in community learning stations for up to 10 hours a week. "I'm kind of reluctant to say everything is good for all kids," Jenkins commented, "but I know this is better than traditional education. The saving grace of the school is our relationship with the kids. I'm not naive enough to believe that any kid who enters the building will be saved. But we help more kids make it than most schools do."

San Diego's College Like High School

Most of the 16 senior high schools in San Diego County, Calif., have adopted some form of informal education. Only one, however, Patrick Henry, has permission from the school board to go as far as it can with teaching and learning innovations. "We're constantly seeking a better way," Principal Donald Giddings says. "We've had three changes of (teaching) style in three years." One student who was graduated with honors in 1971 told Giddings, "I jumped through all the hoops, but I didn't learn a damn thing." In explanation, Giddings says: "He meant he didn't learn anything that was important to him. All of a sudden I realized it's not how you do it but what you offer." Patrick Henry has initiated college-type course registration for the school's 3,444 students. Among the more than 900 course offerings are Bachelor Survival (home economics for boys), Family Relations, The American Athlete in Non-Fiction, The Bible as Literature, and Science Fiction.

California law requires that students collect 30 units of credit in grades 10-12 for high school graduation. They must take competency tests in English, math and history, and minimum course requirements are set for each of these subjects (three semesters of English and history, two semesters of math). In addition, each student must take physical education each semester. The choice of courses for the other 16 credits is up to each student, but if he fails a competency exam he must take a remedial course and re-take the exam.

The school board has authorized 142 staff positions at Patrick Henry, of which 14 have been allocated by the teachers to full-time paraprofessionals. Additional part-time paraprofessionals relieve teachers of some supervisory work, correcting papers and clerical work. Paraprofessionals also staff a full-time production center where they make up individual "learning packs" to meet the needs and desires of both teachers and students. Reflecting on the changes in the five years that Patrick Henry has been San Diego County's experimental school, Giddings muses that "some of the things we've been able to do scare the heck out of me sometimes."

High School 'Houses' in Portland

John Adams High School in Portland, Ore., has become a focal point of the controversy over the feasibility and effectiveness of informal education in secondary schools. When John Adams became an informal school, it was divided into four houses, each with about 300 students. They spent half their

day in a general education program of interdisciplinary problem-centered courses in English, social studies, math and science. The other half of the day was spent in optional work, either in the work experience program or at the resource center for individual study of traditional or six-week mini-courses. Today John Adams is different. One reason is that its enrollment is not homogeneous. It is located between Portland's ghetto and a middle-class neighborhood, and a fifth of its students are from minority groups. Many believed that a single program was not suitable for all. Although students may design their own programs of independent study, the new principal of Adams, Donald Holt, concedes that "they tried it, but it didn't work very well." He says, nevertheless, that students still make most of the decisions about their schedules.

Norma Helzer, president of the Adams PTA, reports that some parents felt strongly that students did well in informal education programs, but other parents wanted to retain traditional education. Adams had to provide both. "When Adams first started, the students had no choice," Mrs. Helzer says. "They had to take the general education course." Parents also contended that, although the general education program satisfied state requirements for math, social studies, science and English, it didn't offer enough science, geometry or history for college entrance examinations or possibly for college itself.

"At Adams, both parents and administrators learned that students do not become natural learners or develop sustained curiosity if they are surrounded with trusting people in a free environment with opportunities for learning," Holt says. "We had to add accountability and give more direction to the kids' learning," Holt explains. "Now we ask a kid, 'Why are you doing that? What are you doing?'"

When Adams opened in 1969, according to Holt, the parents had many misconceptions. Many felt that their predominantly white neighborhood had been invaded by 450 black students. Through two years of tense confrontation, both parents and staff learned a lot. Then the school was opened to parents, many of whom were brought in to help the teaching teams and to help plan the program. "The parents are finally beginning to believe in what the school is doing. Recently, the school did some research on what to do with the school program, and 70% of the parents wished to continue with the general education program," Holt says. Mrs. Helzer believes that parents are generally satisfied with the school now. In 1973, Adams will graduate its first class of students who have been in the school for four years, and these students, Holt says, "are a hell of a lot more serious about their education."

A Debate on Commitment

John Adams exemplifies the controversy over the way to approach informal education in high schools. Two positions are represented by J. Lloyd Trump of the Model Schools Project sponsored by the National Assn. of Secondary School Principals and by Don Glines of Wilson Campus School at Mankato, Minn. Both agree that Adams is now a traditional school with a few informal education trimmings. Trump thinks it failed initially because it did not go all the way to informal education but approached it gingerly. Glines contends that it failed because it did not offer alternatives from the outset, to accustom

parents and students to the idea of informal education. He suggests that Adams should not have gone as far and as fast as it did, but should have started with modular scheduling in a traditional approach. Then, Glines says, Adams could have modified the program step by step, or else it could have introduced informal education with a small group of students within the traditional program.

In contrast, Trump asserts that anything less than total commitment to informal education is no change at all, because informal education is totally different from traditional education. He does not use the term "informal education," holding that schools said to be wholly committed to what they call informal education are in fact only individualizing learning, professionalizing teaching and humanizing the school. "Independent study is not at all freedom or permissiveness," Trump says. "It is covering required content; it is encouraging creativity and going into greater depth. It is sometimes study--read, write, listen to; sometimes work--doing things. It is not always individual. It may be one pupil in a place by himself, it may be one student teaching two others, it may be a remedial group, it may be a group with special advanced interests who want to get together to discuss something."

As Trump sees it, informal education in secondary schools, by any name, should try to provide three types of learning: required learning, learning in preparation for a hobby and learning in preparation for a career. All students should cover the required learning in all subjects. Some will want to go on to the second phase, other students to the third. In any event--and this is crucial to Trump's concept--it is up to the staff to motivate students continually, in group and individual sessions, to learn more about each subject than the students think they want to know. Only in this way, he believes, will most students go beyond the required studies to learning that leads to interests, hobbies and careers. "A big thing is that one subject is not more important than another," he says. Also, the material itself should always suggest side trips--studying something at greater depth or being creative in the field.

Trump's Model Schools Project was begun in 1969 with a $1.03 million grant from the Danforth Foundation to help develop "Schools of Tomorrow." Model Schools must provide learning packages and resource materials; set a course for each student determined by the students themselves, teacher advisors and perhaps their parents; work to keep the students on course by making them responsible for their education; and stimulate the student and motivate him to explore different levels of learning in many subjects. San Diego's Patrick Henry High School was once part of the Model Schools Project but, its principal explains, "Trump made us modify to fit the Model Schools Program," and the changes did not fit Patrick Henry.

PROBLEMS AND PROSPECTS

The weakness of informal education arises from the source of its strength: it follows no set pattern and is characterized by fluctuation, modification, adaptation. The strength of informal education, its supporters say, is that the student is treated as an individual. Opponents claim informal education is subject to misinterpretation, misuse and incompetent teaching. Moreover, informal education's lack of standardization makes it difficult to test its outcomes. How valid are standardized achievement tests when students are learning what they want to learn the way they want to learn in an attempt to learn how to learn, advocates ask.

Ever since informal education was first tried in the United States, opponents have said students taught in this way do not achieve better scores on standard examinations than students taught by traditional methods. Proponents reply that such students' scores are no worse than others and the students themselves seem happier. Some contend that the test instruments rather than informal education are at fault. "If we continue to shape what is done in schools so that it will produce good results on standardized tests, without developing more enlightened criteria, open education is likely to take the same route" as progressivism, Bill Hull wrote in The Case for the Experimental School. Another reply to criticism of informal education is capitulation; districts where informal education fails to result in dramatic test score improvement tend to revert quickly to traditional methods.

Opposition to Informal Education

A school administrator in the West has described the parental panic that erupted in his area when even minor modifications were attempted without of-

Informal Education as an Alternative

Bill Hull of the Fayerweather School in Cambridge, Mass., recommends informal education as an additional alternative but not the sole one. "There is a tendency for educational trends to become all one thing or all something else," he points out. Yet, informal education is not for everyone, its supporters agree. Not all teachers can teach effectively with any one method and not all children can learn effectively with any one method. A wise course for districts to follow, many administrators advise, is to provide choices--not only informal education but modified curriculum as well as traditional education.

fering alternatives. "There's a kind of minor wave of hysteria developing here over the open school trend of innovation," he wrote. "A coterie of shrill critics making many of the same kinds of noises that were made when sex education was the issue.... And they equate it with John Deweyism, brainwashing our kids, 'promoting relativism,' anti-patriotism.

"In another suburban district...an entire junior high open school program, with some free time for students built in, was thrown out along with the principal after a school bond issue that turned on that very issue failed. The controversy embraced all kinds of things: charges of dirty graffiti on restroom walls ('If kids didn't have so much free time, they wouldn't have time to write dirty words on the walls'), claims that sponsors of the program believed in legalizing pot," the administrator said. "Several liberal members of the...staff have resigned or been fired in the wake of the controversy. Is this sort of thing going on elsewhere in the country? Is it another sex education-type imbroglio? Another liberal-conservative confrontation? Or look-say vs. phonics? Is a kind of nationwide uptight reaction developing to imperil many of the innovations developed over the past few years?" he asked.

Principals have been fired when parents decided that informal education was bad for their children. Some students get more freedom in an informal school than they can handle. If a district is to achieve more than minor modifications of traditional education, a period of disorganization or even upheaval must be endured, and the public may not be as patient as the professionals. Experience shows that these are risks that must be faced when considering adoption of informal education.

Impact of Informal Education

Despite local turmoil, informal education is making changes in traditional education. True, there are relatively few completely informal schools in the United States as yet, "but because conventional schools are often willing to adopt parts of the innovative programs, their influence is greater than their numbers," the Council for Basic Education (CBE) has stated.

Positive, unquestioned results of truly informal classrooms are extremely rare, at least at the elementary level. Test scores may not tell the whole story, however. Harold B. Gores, president of Educational Facilities Laboratories, Inc., has reported that elementary school principals told him that when they changed from the traditional eggcrate classrooms to informal, open classrooms, the number of vomitings among children decreased. "This may not be the kind of proof school people are accustomed to," he said, "but I consider it relevant, persuasive and generalizable."

Too Much, Too Soon?

Most authorities on the informal school believe that the concept was largely successful in Britain because it was a gradual, careful next step in educational evolution. In the United States, however, the idea is being implemented like a revolution, and "like all such attempts, its effects are

often disastrous," in the opinion of Arnold Arnold, a student of the informal school movement.

"There is frequently a cyclic pattern to all of this," according to Samuel B. Gold, vice-president of Educational Testing Service. "Do you remember when 'progressive education' had its heyday a few decades ago? Now it is reappearing as the 'open classroom' just as highly touted at the beginning, yet beginning to be questioned for its results as was its original counterpart."

CBE claims that "the open classroom has been more a slogan than a program." Some critics are concerned that many people are trying to change schools so drastically, and overnight, often without a clear idea of what they are changing to, that the future of informal education in this country could be threatened. Casey and Lisa Murrow in their book, Children Come First, admit that "an informal classroom, run without a complete knowledge of its philosophy, is a miserable experience for the children and their teachers."

The Task of the Teacher

If an informal education experiment fails in its daily operation, teachers are the principal cause, according to Don Glines. This may be due, he says, to the failure of many inservice or summer teacher training programs which are poorly taught and fail tc offer follow-up consultation. Glines also contends that new teachers are not thoroughly grounded in informal education because it is presented as an alternative method in a few lectures during a "methods" course. Instead, he would like to see teacher training institutions offer practice teaching in informal classrooms.

Arnold agrees that teachers are too often badly prepared. "Few have taken additional courses in the kind of education that could make the open classroom work," he says. "They tend, instead, to rely on the architecture of the schools to set the tone and the character of the new education." Arnold adds: "Recognizing that many conventional schools were too formal and rigid, too many teachers in the open classroom are throwing the baby out with the bath water. They believe the 'discovery' or 'experiential' learning can take place only if you do away with all 'structure.' Since the old curriculum was less than perfect, some teachers attempt to do without any curriculum." Unless the curriculum is changed, Glines believes, there can be no true change to informal education.

All of the above reasons can contribute to or cause the failure of informal education programs. But, Glines says, the cause may lie elsewhere. In some districts, for instance, the administrative leadership may be opposed to change and block the efforts of any teachers who support informal education. This tactic can also work in reverse, Glines says, if the teachers do not support an administrative decision to investigate or initiate new alternative programs. Contributing also to the apparent failure of informal education in some places, in Glines' view, is the reluctance to provide informal teachers with necessary paraprofessional support and the fact that often the innovative teachers, principals and administrators in a district move on or are asked to leave. They are then replaced by middle-of-the-roaders who are unwilling to jeopardize their positions by further innovation.

Making Haste Slowly

"If...we agree that careful work on a small scale is the way to initiate a worthwhile reform," says Ewald B. Nyquist, New York commissioner of education, "we will avoid the 'bandwagon' approach and build in the key elements essential for a dynamic ongoing process of change, capitalizing on our own experience with progressive education and our British friends' experience in open education. These elements," Nyquist says, "include involvement of parents, teachers and administrators; inservice training for teachers and other personnel; built-in administrative support for each teacher; patience to allow the philosophy to realize itself through gradual progressive development; and tolerance of flexibility--even confusion at times--in regard to schedules, routines, etc. We must make haste slowly. It is not necessary that the whole school or the whole day be immediately converted to open education. Rather, the schools should change a little at a time so that children and teachers can grow with the change. It takes a great deal of learning on the part of everyone involved...before open education can become a successful venture."

A Final Thought

Too often, Arnold asserts, principals have used architecture and catch phrases to convince parents and voters to allocate funds for informal schools. "But often they neglect to point out that to be successful, the open classroom requires considerable home and family cooperation, and a thorough understanding on the part of parents of what is expected of their children. Parents," he says, "must create a climate in the home that allows children to be self-disciplined in the open classroom." Arnold believes the informal school is an "excellent idea." He is convinced that it works well in Britain. "But before it was adopted," he says, "years of work went into teacher training, parent education and curriculum development." He warns that Americans are trying to do it overnight, "without any preparation and without consideration of the differences between U.S. and British families, children, schools and the environment in which children are reared."

Many of our school administrators and teachers are not aware of these essential differences and preparations, Arnold says. As applied now in too many public schools, informal education is an expensive fad that is likely to backfire--"and our children will be the losers," he warns.

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